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TABLE OF CONTENTS

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NEW ENGLAND SURGICAL SOCIETY

THE PATHOLOGICAL AND PHYSIOLOGICAL BASIS FOR THE SURGICAL TREATMENT OF CHRONIC GASTRIC AND DUODENAL ULCER. *By David Cheever, M.D.*, Boston. ... 707

GASTRO-JEJUNAL ULCERS. *By Edward R. Lampson, M.D.*, Hartford, Conn. ... 712

DISCUSSION OF PAPERS OF DR. CHEEVER AND DR. LAMPSON. 715

ORIGINAL ARTICLE

HEMORRHAGIC OSTEOMYELITIS. *By Ernst H. Arnold, M.D.*, New Haven, Conn. ... 717

THE MASSACHUSETTS MEDICAL SOCIETY

ADDRESSES DELIVERED BEFORE THE SUFFOLK DISTRICT MEDICAL SOCIETY MEETING OF OCTOBER 26, 1921. ... 721

THE SIXTH JOINT MEETING OF THE DISTRICT SOCIETIES. ... 726

BOOK REVIEWS

Practical Tuberculosis. By Herbert F. Gammons, M.D., St. Louis, Mo. ... 727

Practical Chemical Analysis of the Blood. By Victor C. Myers, Ph.D., St. Louis. ... 727

The Practical Medical Series (Charles L. Mix, General Editor.) Vol. I. General Medicine. Edited by Frank Billings and Burrell O. Raulston. ... 727

EDITORIALS

THE PRACTICE OF MEDICINE BY NURSES. ... 728

THE COMMITTEE ON PUBLIC HEALTH OF THE MASSACHUSETTS MEDICAL SOCIETY. ... 729

JOURNAL AFFAIRS. ... 729

SMALLPOX. ... 730

CONTINUATION STUDY FOR PRACTITIONERS. ... 730

MEDICAL NOTES. ... 730

NEWS ITEMS. ... 731

OBITUARIES

WALTER CHANNING, M.D. ... 731

JOHN JOSEPH FLYNN, M.D. ... 732

CHARLES WALTER SWAN, M.D. ... 733

MISCELLANY

FOURTEENTH ANNUAL CHRISTMAS SEAL SALE. ... 733

STAFF CLINICAL MEETING OF THE MASSACHUSETTS GENERAL HOSPITAL, NOVEMBER 7, 1921. ... 733

CORRESPONDENCE

MATERNITY LEGISLATION. *Benjamin Loring Young.* ... 735

FEE TABLES. *Walter L. Burrage.* ... 737

A DIFFERENT SORT OF MEDICAL MEETING. *Henry A. Christian.* 738

The New England Surgical Society

THE PATHOLOGICAL AND PHYSIOLOGICAL BASIS FOR THE SURGICAL TREATMENT OF CHRONIC GASTRIC AND DUODENAL ULCER.

BY DAVID CHEEVER, M.D., BOSTON.

[From the Surgical Service of the Peter Bent Brigham Hospital, Boston.]

ALTHOUGH Chauvinists among internists and surgeons continue to differ widely in their views, it is clear from an examination of recent literature that the two groups as a whole find themselves much more in accord than formerly in the treatment of peptic ulcer. That the subject continues to excite great interest and some controversy is attested, however, by the flood of contributions which fill medical periodicals, and few gatherings like the present escape the presentation of the subject in some form or other. It seems probable that the increasing appreciation among clinicians of the normal anatomy and physiology of the gastro-intestinal tract, and of the changes wrought in it by disease, is responsible for this promising approach to an entente cordiale. Two groups of men cannot reason from identical premises and reach views at total variance with each other, and the fundamental sciences, anatomy and physiology, together with the morbid changes wrought by disease, constitute the premises upon which the science of medicine is founded.

Examination of the pathology of peptic ulcer involves consideration of the most promising views as to its cause. Among these may be noted:

1. Mechanical, thermal or chemical trauma.

2. Infection of the mucous membrane by infarction emboli of bacteria from some chronic focus, such as the appendix, the gall-bladder, the teeth, tonsils, or sinuses, with continued reinfection.

3. Localized trophic disturbances, similar to Raynaud's disease.[1]

4. Systemic disturbances produced by acute or chronic poisons of various types, including those associated with other diseases, and with extensive burns of the body surface.

5. Faulty pose and defective breathing movements impairing the nervous and circulatory tone in the abdominal viscera.[2]

6. Infection with an alleged specific fungus, Oïdium albicans.[3]

As an indispensable associated factor there is usually invoked the digestive or corrosive action of the gastric juice, which is held by many to be the chief agent in developing and preventing the healing of the ulcer after its causation by one of the above named agents.

With regard to mechanical and thermal trauma, it appears that the gastric mucosa is not easily injured. Ivy,[4] experimenting on dogs, exposed a pouch of the pyloric antrum to the outer world for a period of nearly a

year, without being able to note any ulceration, bleeding, or change in its character. Having established an experimental ulcer, he manipulated and rubbed it twice daily with bread crumbs (doubtless simulating peristalsis) until marked congestion and some bleeding occurred, which caused the ulcer to require three times the normal interval for healing and resulted in considerable scar formation. It is the common experience with surgeons that after the extensive traumatisms caused by gastric resections, the wounds of the stomach wall, including the mucosa, heal kindly and promptly. The duodenal mucosa heals with almost equal readiness, both in experimental animals and man. It seems certain then that physical trauma is not an important element in causing ulcer.

The amazing feat of Rosenow in cultivating strains of bacteria which have an elective affinity for the gastric or duodenal mucosa and cause ulcers when injected into the blood stream of experimental animals, leaves little doubt that foci of infection elsewhere in the body may be responsible, in the form of bacterial embolic infarctions, for the tissue injury which results in ulcer. This is supported by the analogy of haematogenous infections of joint synovia and other serous membranes and of the endocardium. Clinical proof, however, is difficult to obtain, although some observers believe that they have been able to note significant lesions of the appendix or gallbladder in a large proportion of cases.

An interesting observation by Reeves[5] calls attention to a peculiar arrangement of the arterial supply along the lesser curvature of the stomach and duodenum, predisposing to vascular stasis and to failure of compensatory circulation in case of injury, which may explain the great frequency of ulcer in this situation. To the other causes mentioned above, Smithies[6] adds a number of suggestions based on the analysis of 522 proved cases of ulcer, to the effect that in 14.7%, the cause was arteriosclerosis, with or without vascular hypertension, in 13% visceral hypertonia, that is, vagus or splanchnic hyperfunction, in 5.2% visceral hypotonia, and in 3.4% metabolic dysfunction involving the thyroid, suprarenal or pituitary. Smithies is able to analyze the entire series and classify the cases into ten etiologic groups, and his paper is a plea for treatment directed toward these alleged causes of ulcer rather than toward the ulcer itself. At present these suggestions are almost purely speculative.

It may be granted then, that some form of injury in the broadest sense to the visceral wall is the first step in the establishment of ulcer. Doubtless small, transient, rapidly healing ulcers are very common, causing symptoms classified vaguely as "indigestion" or "gastritis," accompanied usually by pylorospasm and hypersecretion. They are usually not diagnosed unless, as occasionally happens, they are characterized by a smart hemorrhage or even by perforation. They tend to spontaneous and complete recovery and probably have no especial tendency to recurrence.

But a small minority fail to heal, grow larger and become chronic. For years, in fact, according to Smithies, since the time of Celsus, the acid gastric juice has been held responsible. The "corrosion" or "autodigestion" of the injured tissue has been considered to be the essential cause of the failure of gastric ulcer to heal. The occurrence of ulcer only in the stomach, the portion of the duodenum proximal to the opening of the bile and pancreatic ducts and in the jejunum at or just beyond the stoma of a gastrojejunostomy, regions where alone the acid pepsin is active, is strong evidence of the part played by this agent. This is supported by the clinical association of hyperchlorhydria with ulcer, and by the relief and cure of ulcer following neutralization by alkalies. But contrary views are not lacking; and there is abundant evidence that ulcer and hyperacidity are not necessarily associated. Wilensky[7] studied 63 cases before and after operation, and found that a very small group showed a hypo-acidity, another group showed no disturbance of acid secretion, while still another was normal except for a prolonged digestive period. He reaches the conclusion that ulcer is not necessarily accompanied by disturbances of acid secretion, but his statistics show that the majority of his cases have co-existent excess of acid. Smithies, pleading, as noted above, for the treatment of ulcer by indirect methods, says that the well-nigh universal belief that ulcer is due to the corrosive action of the acid juice is not warranted by experimental laboratory, or clinical facts. An unhealed ulcer has been noted in an acid-pepsin free stomach and without ulcer symptoms. Provided that the mucosa is intact and bile is not present, hydrochloric acid of ten times a normal concentration may be introduced into the stomach of the experimental animal without producing ulcer, and in cases of unhealed ulcer, acid of five times normal strength will not cause symptoms in the quiescent stage. An ulcer has been known to progress to a fatal termination in the total absence of acid. He refers justly to the fact that an acid medium is the normal habitat of the gastric mucosa, in which it may be supposed to thrive better than in a neutral or alkaline one, and states that prolonged alkalinization will lead to a compensatory over-acidity of the acid cells, and may ultimately result in the degeneration of the mucosa. He calls attention also to the extraordinarily active healing of the stomach in spite of the acid medium, after surgical trauma.

These observations are adequately explained by the pathology of chronic ulcer. If a piece

of gastric mucosa be excised, and placed in a normal acid-pepsin medium at body temperature, it will be digested like any other bit of animal tissue. Evidently when no longer living it possesses no inherent attributes which prevent digestion. If, after surgical trauma, the tissues necrose, they undergo autodigestion and are thrown off. Ivy[4] and others have noted the production of postoperative ulcers from pressure of the gastro-enterostomy forceps. If, then, autodigestion is inevitable after tissue death, it is certain that there must be a degree of devitalization short of actual death where the tissue cells fail to resist this process. In the last analysis, it must be through the blood and lymph stream that the maintenance of vitality is afforded, and it seems as though Nature had made especial provision for this in the case of the stomach by the magnitude of its arterial blood supply and the richness of the vascular anastomosis, especially in the submucous layer, from which the mucosa is supplied. Every surgeon has observed that the incised stomach bleeds furiously, and has wondered that so many wounds, overlappings, reconstructions, and sutures, may be made simultaneously without failing to secure healing.

The probable sequence of events in the formation of ulcer may be outlined thus: as a result of an infarction embolism with thrombosis, an area of mucosa is devitalized beyond the critical degree and surface "corrosion" takes place. In the vast majority of cases this heals quickly and spontaneously, having caused no symptoms at all, or only transient symptoms, or very rarely an acute hemorrhage. In the exceptional case, as a result of the extent of the original devitalization, or of failure of the ulcerated area to obtain rest, or of mechanical irritation by gastric contents, or of constant reinfection from the original focus, or of some obscure disturbance of neuro-trophic or endocrine control, or of altered gastric physiology (as will be noted later), the ulcer does not heal, penetrates deeper into the visceral wall and becomes chronic. Instead of the rapid proliferation of mucosal epithelium over a relatively intact submucosa and the regeneration of the secretory glands, we note the filling of the defect with granulation tissue over which the mucosa may spread, perhaps with little impairment of its vascular nutrition. On the other hand, this may not succeed, the granulation tissue becomes converted into fibrous scar tissue, both at the base and sides of the ulcer; this tissue becomes more dense and compact and becomes progressively devascularized by the contraction and thrombosis of its vessels. Thus the vascularity upon which the mucosa depends so strongly for the maintenance of its vitality is destroyed, and healing is imperfect, or cannot be made permanent, or fails altogether.

Thus is produced a pathological condition essentially similar to chronic ulcer elsewhere. It is not specious to compare it to chronic indurated varicose ulcer of the lower leg. Here the ulcer fails to heal first on account of infection, irritation associated with lack of rest, and circulatory impairment due to the varicose veins. Later if these conditions are not mended, the vascular granulation tissue base is replaced by a thick layer of dense fibrous tissue through which no vessels can penetrate adequately to nourish regenerating epithelium, and it is a common observation that rest, disinfection of the ulcer and operation on the varicose veins may alike fail to secure healing. Further, if the fibrous base is widely excised, giving free access of vigorous new vessels to the affected area, spontaneous healing, perhaps aided by grafting, will result.

In the leg ulcer, we have the indurated base, the local infection, and the stagnating venous circulation to reckon with; in the peptic ulcer we have the indurated base, perhaps local infection, and certainly the unfavorable action of the gastric juice on ill-nourished tissue cells.

The disturbed physiology is equally important to consider with the pathology. The nerve supply of the stomach and duodenum is through the vagus and sympathetic, whose afferent fibres carry impulses which are translated into motor or inhibitory reflexes transmitted through their efferent fibres. These afferent stimuli are not of the nature of tactile sensibility or of pain, for it is well known that severe trauma including cutting, pinching, cauterizing and the application of chemical agents can be inflicted on the stomach and intestines without causing any sensation. The plausible theory that the pain of ulcer is due to the irritant action of hydrochloric acid on the nerve endings exposed in the ulcer must be discarded. Most of the afferent nerve endings are found in the submucous and muscular coats, rather than in the mucous membrane, and when these are exposed in ulcerations to the irritant action of the acid gastric juice, an excessive reflex motor activity is engendered (Endelman[8]), which would increase greatly intra-gastric tension were it not relieved at first by the relaxation of the pylorus on the approach of a peristaltic wave, according to the "law of contrary innervation." But when the chyme, acid or hyperacid, passes into the duodenum, an excessive reflex inhibition of relaxation of the pyloric sphincter is caused, so that relief of the intra-gastric pressure is not afforded, and increased tension results, which, according to Hurst[9], is the only adequate stimulus producing visceral pain. The pylorospasm causes delay in the emptying of the stomach, which in itself causes hypersecretion, which in its turn causes more ulcer irritation, from which results more vigorous peristalsis, and more obstinate inhibition of

sphincter relaxation, establishing thus a vicious circle of disordered physiology.

It is not intended in this paper to champion the cause of surgery in the treatment of peptic ulcer, but rather to examine the basis for treatment as revealed by present-day conceptions of the pathology and pathological physiology of the condition. Medical treatment as carried out by Sippy[10] and others aims to improve the health as a whole and diminish general reflex nervous response by physical and mental rest, and to correct acidity, hypersecretion, and pylorospasm by alkaline neutralization and lavage. To this is added, as a matter of course, the treatment of any of the local or systemic conditions enumerated by Smithies[6] and others as being possible etiologic factors. This treatment is the logical corrective of the deranged physiology of the viscera involved; it is certain to relieve symptoms and may be expected to cause healing of the ulcer unless the local pathological condition makes this impossible. That the clinical results of medical treatment are excellent does not admit of a doubt. Eggleston[11] says that among 156 cases treated medically 72% reported no return of symptoms after the lapse of at least 3 years, and 28% reported recurrences. These cases were "proved" by the usual clinical and laboratory tests. He states that patients are expected to keep up a modified diet for months or even years. Sippy[10] gives an even higher percentage of medical cures. Not only is the cure symptomatic, but in many instances x-ray studies have shown the gradual and complete disappearance of a penetrating crateriform lesion. At postmortem examinations it is a not unusual occurrence to find completely healed scars whose histology makes it reasonably certain that the lesion was of the deeply penetrating chronic type.

Surgery offers a direct attack upon the pathological process and promises its cure by removing it, and at the same time tries to correct the physiological dysfunction by a permanent artificial expedient. The consensus of opinion is crystalizing more and more in favor of the excision of the ulcer where possible. Excision of ulcer at the pylorus, on all but the highest part of the lesser curvature, and almost anywhere on the anterior surface of the stomach is usually practicable except in the face of unusual complications, while transgastric resection of posterior penetrating ulcer, though more formidable, can usually be carried out. Resection removes the indurated, avascular scar tissue which forms the base and periphery of an ulcer and secures prompt healing of the sutured wound by insuring it an adequate blood supply. The observation that wedge-shaped excisions at the lesser curvature sometimes interfere seriously with the peristaltic wave and give imperfect clinical results, has led some authorities like Moynihan[12] and Urrutia[13] to advise sleeve resection, on the ground that the mortality is but little higher and the results more favorable. The widely held view that excision is more essential in gastric than in duodenal lesions on account of the frequency of malignant metamorphosis of the former has undergone considerable modification lately. Gross and Held[14] do not agree with Wilson and McCarty[15] and with Cole[16] that cancer frequently develops on ulcer, and say that such cases are almost invariably ulcerated but primarily malignant lesions. Wilensky[7] holds the same view. On the other hand, C. H. Mayo[1] believes that gastric ulcer is essentially malignant, while Deaver[17] considers carcinomatous degeneration a decided menace. Whichever view shall be proved to be correct, at present the emphasis is placed on the desirability of excision. Most surgeons would agree also that at times it is necessary on account of the impossibility of distinguishing between the gross characteristics of ulcer and carcinoma.

In duodenal ulcer the question is modified by three considerations: first, the technical difficulty of excision on anatomical grounds; second, the possibility of effective exclusion of the ulcer by proximal closure of the viscus; and third, the exceeding rarity of carcinoma in this situation. While many favorably placed duodenal ulcers may be excised, it is justifiable not to insist on their removal since the complete rest and freedom from hydrochloric acid digestion afforded by exclusion make it unnecessary.

The surgical correction of pathologically altered gastro-duodenal physiology is obtained by two similar methods, each of which has its advocates,—gastrojejunostomy and some form of pyloroplasty or gastroduodenostomy. These expedients secure a more prompt emptying of the stomach, neutralize to some extent the acid gastric juice by admixture with duodenojejunal contents, cause relaxation of pylorospasm and prevent hypersecretion by preventing retention. It is undoubtedly true as shown long ago by Cannon and Blake[18] and confirmed by other observers that in the presence of an open pylorus the gastro-jejunostomy stoma may transmit but a part of the contents of the stomach and indeed may close completely, but experienced surgeons like Deaver[17] are doubtless right in maintaining that a properly placed and made opening will endure in spite of it. The neutralization of gastric juice obtained varies within wide limits as to degree and time. Wilensky[19] studied 63 cases, for the most part within three months of operation, and found usually an immediate lowering of total acid concentration after operation, with subsequent return to its former level or even exceeding it, which he attributes to a stimulus to the acid-secreting cells following the attempt at neutralization, in accordance with physio-

logical laws. Lemon[20] observed a reduction in free hydrochloric acid of 46% following gastroenterostomy. The weight of evidence is decidedly in favor of the view that a partial neutralization is obtained and persists long enough to favor the healing of any operative wound. The advocates of pyloroplasty, like Horsley,[21] Davis,[22] and Finney and Friedenwald,[23] maintain that this operation promotes the emptying of the stomach in a more physiological manner, avoids the possibility of gastro-jejunal ulcer, and minimizes the pain, vomiting, bleeding, and diarrhoea which are the occasional sequelae of gastro-jejunostomy.

Recent statistics as to the end-results of surgery prove to be divergent, as might be expected. C. H. Mayo[1] reports the operative mortality in 4,532 cases of duodenal ulcer as 1.76%, and in 1,191 cases of gastric ulcer 3.77%. Most of the deaths occurred in neglected or complicated cases of long standing. Among 438 cases of duodenal ulcer operated on and traced, 70% were found to be "well," 27% were "improved," and 3% were "unimproved." This authority justly remarks that all except emergency cases had been treated by many physicians for long periods before having the benefit of surgery, and makes the comment that more patients die from complications than from operations. Eggleston[11] mentions 41 patients operated on with a mortality of 7.4%, and an end result of 44% cured, and 36% with recurrence. Coffey[24] reports 233 cases operated on by various methods with a mortality of 4.3%. Deaver[25] has operated on 55 cases of acute perforation with extravasation, with the remarkable mortality rate of 5.5%. Only two cases had subsequent symptoms, and in both closure was made without gastro-enterostomy. Menghetti[26] analyzes 700 cases, with a mortality after thermocauterization and simple gastro-enterostomy of 1% and after partial gastrectomy of 5%, and remarks that the latter operation is certain to be curative. Eusterman[27], in analyzing 82 cases of gastro-jejunal ulcer states that 8% of the cases at the Mayo Clinic had a recurrence of symptoms within one year after operation for ulcer. Smithies[28] examining 273 patients after operation (of whom 21% had been operated on within 6 weeks) found 49.8% well or with minor digestive upsets, 38% improved but still dyspeptic, 6.9% not improved, and 5.1% made worse by the operation. Davis[23] quotes Bastedo as saying that "in our own practice ulcer cases that have had one or more operations come for treatment almost as frequently as cases that have not been operated on," and gives it as his own opinion that from 15 to 40% of operations for gastric ulcers are failures. Perhaps the most striking figures are quoted by Balfour[29] from investigations of the Actuarial Society of America showing that of 2,323 patients operated on at the Mayo Clinic between 1906 and 1915, the operative mortality from all causes in 545 cases of gastric ulcer was 4.5% and in 1,684 cases of duodenal ulcer was 2%. 17% of those operated on for gastric ulcer died within an average period of 3.6 years, and 5% of those operated on for duodenal ulcer have died in an average period of 3.4 years. Among the duodenal ulcers, the mortality was actually slightly less than in a similar general population group. The insurance investigator says: "While I cannot prove my statement, I believe that a much larger number of persons would have died but for the operation."

It is clear that there is a wide discrepancy in the statistics of the results of surgical treatment of ulcer from different sources, and it is to be hoped that additional data will be forthcoming until more reliable evidence can be deduced as to the value of various therapeutic measures. As a contribution in this field, the following figures from the clinic of the Peter Bent Brigham Hospital, Boston, are offered as a preliminary survey. It is intended that a more accurate analysis of the results of particular procedures may be presented later.

At this hospital from its foundation in 1913 to December 31, 1920, operations were performed for the relief of gastric and duodenal ulcer on 134 patients. There were six postoperative deaths, giving a mortality of 4.4%. Of the total number, 82 were duodenal ulcers, 51 were gastric, and 1 was not stated. This is a larger proportion of gastric ulcers than is usually found, and raises a question as to the interpretation of the location of the often indeterminate pylorie ulcer. Of the 82 duodenal ulcers, 48 have been traced, and of these 29, or 60%, are "well," 12, or 25%, have "slight symptoms," 7, or 14%, have "definite recurrence," and no case reports a worse condition than before operation.

Of the 51 gastric ulcers, 29 have been traced, and of these 22, or 75.8%, are "well," 5, or 17.2%, have "slight symptoms," 2, or 6.8%, have "definite recurrence," and no patient reports a worse condition than before operation. Looking at the matter more broadly, it is perhaps fair to say that at the expense of a mortality rate of 4.4% in the entire series, the 60.1% who could be traced yield a percentage of 88.3% cured or much improved, and a percentage of 11.7% with definite recurrences, some of whom indeed admit a certain degree of benefit. While the operative mortality figures run to December 31, 1920, but 8¼ months previous to this inquiry, the end-results refer to patients from 18 months to 2 years after their discharge from the hospital.

When it is remembered that surgical statistics deal only with proved cases of ulcer and that it is undoubtedly true that the patients who are operated on present more serious con-

ditions and complications on the average than do those who are treated medically, is it not reasonable for surgery to claim an honorable and accepted rôle in the treatment of chronic ulcer?

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termine, if possible, the cause or causes, and then find the means by which such untoward results may be avoided.

If we are going to retain gastroenterostomy as a curative measure in peptic ulcers, we must minimize our disastrous consequences, such as jejunal ulcer. Brawm, in 1899, was the first surgeon to find a jejunal ulcer which had followed a gastroenterostomy, and not until 1902 was one reported from France by Quénu. About one year later one was discovered in England. In 1910, W. J. Mayo had only seen three cases.

Since then, however, numerous surgeons have reported cases, and in 1919, Garnet Wright of Manchester, England, wrote a most excellent article and studied minutely all of the cases up to that time, together with three of his own which numbered one hundred and fifty-five. Eusterman, in 1920, gave a clinical study of 83 cases operated upon at the Mayo Clinic, and Judd has recently cited 101 cases. The increased number is probably due to two causes. One, the greater number of gastroenterostomies being performed, and the other the fact that the diagnosis of gastro-jejunal ulcer is more frequently and more accurately made, because we are now aware that some of the unfortunate late results of the operation are caused by the gastro-jejunal ulcer rather than a recrudescence of the primary lesion for which the operation was performed.

The frequency of their occurrence is very difficult accurately to determine, due to causes that cannot be controlled, especially the lack of careful follow-up system of operative cases. An approximation, however, may be made. During the past five years, from January 1, 1915, to January 1, 1920, there have been performed at the Hartford Hospital, 147 gastroenterostomies. At the Hartford Hospital there have been three jejunal ulcers, an occurrence of two per cent. This is probably low, due to the fact that some have been overlooked. In 1028 gastroenterostomies, as reported from various clinics, there occurred seventeen gastrojejunal ulcers, an incidence of about 1.7%. The percentage now is on the increase, due to the better diagnosis of the poor post-operative results and probably more closely approximates 3% than 2%.

By most authorities the chief and primary cause given is the use of the non-absorbable suture which ulcerates through even though it had only been used in approximating the serous surfaces. This suture is supposed to act as an irritant mechanically, and also more actively as a source of infection. In many instances such a suture has been found at the time of operation, either hanging free or else clearly exposed in the ulcerated area, but had such a suture been used, as was formerly always the case, would it not have been exposed had the ulcer been due to some other cause?

GASTRO-JEJUNAL ULCERS.

BY EDWARD R. LAMPSON, M.D., HARTFORD, CONN.
Surgeon to the Hartford Hospital.

IT is exceedingly unfortunate that the usually happy outcome of the operation of gastroenterostomy for duodenal or gastric ulcer, accompanied by excision of the ulcer, where possible, should ever be dampened by the occasional occurrence of a jejunal or gastro-jejunal ulcer. It therefore should be our aim to de-

I am rather of the belief that too much emphasis has been laid and too much blame given to the non-absorbable suture.

Soresi, in 1915, did gastroenterostomies, using silk and linen as suture material, upon 47 dogs, and later did autopsies upon them. He found the linen hanging free in all autopsies but one; but only three dogs had ulcerated areas at the site of operation, and none showed symptoms of ulcer.

As put forward by Patterson, another etiological factor seems to be the effect of the acid gastric juice upon a portion of the intestine less accustomed to entertain it than the first portion of the duodenum, where its irritating quality sets up an ulceration in an area more sensitive to it than the place where it normally emptied. This theory seems to be borne out by Wright's series of cases, where the greater per cent. of jejunal or gastrojejunal ulcers followed cases of anterior gastroenterostomy or operations in Y, or gastroenterostomies with an enteroenterostomy.

In the two latter types of operation, the beneficial effect of the lowering of the acidity of the acid gastric contents by the biliary and pancreatic juices is lost. This is further supported by the fact that only one case has been reported following a carcinoma, where it is well known there is a diminished acidity. Other causes may be, injury done by clamps or rough technique at the time of operation, too great recklessness in diet following operation, and lack of careful supervision for a prolonged period.

Patterson has classified the types of ulcer according to their situation. First: Gastrojejunal, where the ulcer occurs at the site of anastomosis, and jejunal, where the ulceration is in the jejunum opposite the stoma, or in the efferent loop, and very rarely in the afferent loop of the jejunum.

SYMPTOMS WHICH SHOULD LEAD TO DIAGNOSIS.

Following a gastroenterostomy, we will assume that the patient has been cured or benefited for a period varying from a few months to four or five years. Most of these ulcers occur before the expiration of one year, then symptoms may appear which closely resemble the original trouble for which an operation was sought. Pain is the most common one, and is rather more intense. It may be due to adhesions, and then will be marked in certain positions. Local tenderness is generally present and more apt to be beneath the left rectus than the right. A tumor may be felt, there is often vomiting and occasionally hematemesis and melena. X-ray examinations are of assistance in arriving at a diagnosis, but are not as reliable as in the diagnosis of gastric or duodenal ulcer.

There is another class, as that of my first case, where the gastro-jejunal ulcer is present for an indefinite period and then becomes adherent to the transverse colon and ulcerates into the colon, forming a gastro-jejunal colic fistula. Here the patients, after a lapse of time, show the symptoms just given, and after the ulceration into the colon takes place, there appear in addition the typical symptoms of such a condition,—rapid emaciation, diarrhoea of undigested food, fecal vomiting and eructation of foul-smelling gas. Fecal matter may be recovered by gastric lavage. A barium enema may immediately be discovered in the stomach by the x-ray and *vice versa*.

There is still another class of cases where the perforation of the jejunal ulcer takes place. This type may have given previous symptoms of the ulcer or, as so often happens in the perforation of a duodenal ulcer, no previous ulcer history can be obtained. The first indication is that of severe, sudden pain in the upper left quadrant of the abdomen, subsequent board-like abdomen, together with the other symptoms that accompany the perforation of any abdominal viscus.

TREATMENT.

The treatment must be divided into those methods which will tend to prevent such a result and the treatment of the ulcer after diagnosis has been made.

Linen, silk, and other non-absorbable sutures should not be used even when interrupted, although, to my mind, they may not be the true cause but only an evidence of the long existence of a non-absorbable suture. They should, however, be avoided as there is no good reason for their use, the absorbable suture being all that is necessary.

Gronnerud, of Chicago, operated upon 4500 dogs experimentally, to determine the best method of operation and the efficacy of non-absorbable sutures, and found upon autopsies, that the mechanical failure of catgut sutures was never observed. Within the last few years most surgeons have been using simply two layers of catgut with good results. During the past two years I have used nothing but gut and have now perfect confidence in its ability to resist absorption a sufficient length of time to permit of firm union taking place.

Operations in Y and an additional entero-anastomosis should not be done. Gentle manipulation and the avoidance of the use of clamps is also to be recommended. Gastroenterostomy can be done just as well with stay sutures and without clamps, and there is little likelihood of any more leakage of gastric or duodenal contents than with clamps.

The question now arises, how should we primarily treat our duodenal ulcers in the light of the fact that we do get secondary jejunal ulcers in about three per cent. of the cases by our present methods of treatment?

Would it not be wiser to do a simple excision of the ulcer by the knife or by the Balfour cautery method and not follow it by a gastroenterostomy? We should more often consider the possibility of doing some form of plastic operation at the pylorus, such as the Finney pyloroplasty, as gastroduodenostomy or the recently published operation of Horsley. In all instances, however, we should follow the excision of a gastric ulcer by a gastroenterostomy, except where a more extensive operation is done, such as partial excision, pylorectomy, or the so-called sleeve operation. Postoperatively, there should be careful regulation of the diet and the patient should be warned to keep in touch with his family physician in order that he may observe rational habits of eating and living.

Treatment of the gastro-jejunal ulcer itself will depend upon the condition found and may require much more radical surgery than the primary operation. The stoma may have to be closed and a new one made, or the ulcers may be excised as in my two cases. If the primary lesion for which the operation was performed is still present and operable, it may be removed and the gastroenterostomy broken up and repaired without making a new stoma. The relief of such a condition will surely tax the ingenuity and resources of any surgeon to the utmost.

The total number of reported cases of gastro-jejunal ulcer has not been very great, and it seems to me that it is the duty of those having such cases to so present them that they may be found in the literature.

CASE 1. A. J. D. Age, 34. Occupation, chauffeur. March 8, 1920, entered the Hartford Hospital with the following history: On January 1, 1914, a posterior gastroenterostomy was done by Dr. O. C. Smith at the Hartford Hospital for an indurated ulcer of the duodenum. The result of this operation was perfect until April, 1919, while patient was at Atlantic City. He then suddenly began to have diarrhoea and lost weight rapidly. His movements were watery, six to eight a day, and contained large amounts of fat. He belched quantities of foul-smelling gas of a fecal odor. Had no pain in the abdomen at any time, but was uncomfortable after eating. Also felt weak and tired and often lay down after meals. He vomited occasionally, no hematemesis. There was marked loss of flesh. Notwithstanding, his appetite remained good and he kept at work as a chauffeur. From time of onset, condition continued in spite of various diets and treatment.

Physical examination negative, except evidence of loss of flesh. No abdominal tenderness. Laboratory tests: Blood, blood-Wassermann, and stools were negative. On gastric analysis, a yellowish precipitate was reported, but which was not diagnosed as feces. X-ray examination showed that the colon began to fill immediately after receiving the meal, and following an opaque enema the barium at once entered the stomach. The diagnosis of a gastro-colic fistula was made.

Operation — March 22, 1920, showed the transverse colon adherent to jejunum, 2½ cm. from the gastroenterostomy and to the right of it. The union was separated, the ulcerated area excised and both colon and jejunum closed. The patient made an uneventful recovery except for a slight phlebitis in left leg; gained fifteen pounds during his post-operative convalescence of 26 days, and has remained well up to this time.

JEJUNAL ULCER. CASE NO. 2.

CASE 2. C. P. Age, 38. Occupation, millwright. On January 29, 1920, Dr. Bell did a short loop posterior gastroenterostomy for an indurated duodenal ulcer, using interrupted silk for the outer layer of sutures. The patient made a perfect convalescence except on the tenth post-operative day he complained of a good deal of pain and vomited several times. The vomitus was streaked with blood. On April 28 he was readmitted to the Hospital, saying that for a time after his operation he felt perfectly well, then began to have pain, and for the past two weeks it had been constant, of a steady, gnawing character, but worse about one and one-half hours after eating. Pain was to the left of the mid-line in the left upper quadrant, but sometimes radiated to left lower costal margin and back. He vomited several times and on two occasions, blood. He passed blood by rectum one week ago.

Physical Examination—Negative, except for evidence of recent loss of weight and marked tenderness in the epigastrium to left of midline, and distinct muscle spasm. Fluoroscopic findings negative, except for hypermotility of the stomach. On account of the return of symptoms, hematemesis and hypermotility of stomach, a diagnosis of jejunal ulcer was made.

Operation—April 29. A jejunal ulcer was found on the efferent loop 1½ cm. from the gastroenterostomy. The gastroenterostomy was

found to be intact, healed throughout, with no evidence of linen thread. The duodenal ulcer was thoroughly examined and found much indurated. No attempt to excise it was made on account of the patient's condition and the difficulty presented. The jejunal ulcer was excised.

As a result of writing to this patient to ask his post-operative condition, he came to my office on September 2nd. He presented symptoms suggestive of another jejunal ulcer. After his second operation he felt again that he was going to be cured. Had gained weight and could eat better, but alas, two weeks ago his symptoms returned much as before. Pain was so constant that he slept poorly and one night he walked the floor. Pain came on one and one-half hours after eating and continued until next meal, which sometimes relieved it. Vomited, but no hematemesis or tarry stools.

On physical examination, there was tenderness just to the left of the mid-line in the epigastrium. He was put on medical treatment for two weeks but without benefit. At the end of that time, he said he preferred to have an operation.

Fluoroscopic and roentgenological examination by Dr. Roberts showed evidence of a gastro-jejunal ulcer.

Operation, September 17, 1921, disclosed a very small gastro-jejunal ulcer on the pyloric side of the anastomosis. No linen thread was found exposed in the stoma. The ulcer was excised. The anastomosis separated. The stomach and jejunum closed with two layers of catgut. The change that had taken place in the duodenal ulcer was remarkable. It had almost disappeared and only a small scar gave evidence of its location.

The second operation in this case I now realize was inefficient as it was followed by the formation of a second jejunal ulcer. The man appears to be one of that type who repeatedly develops gastro-jejunal ulcers as long as the anastomosis is left intact. Several such cases have been reported.

Dr. Rowley has recently had a case which he has kindly allowed me to mention. The patient had a posterior gastroenterostomy for duodenal ulcer five months before entering the Hartford Hospital. Three months after operation there was a return of symptoms with a gastric hemorrhage. This hemorrhage was small in amount, more or less constant over a period of two months, also accompanied by black, tarry movements. Very little pain and discomfort were present, the symptoms being those primarily of hemorrhage. An x-ray examination in this case showed a definite jejunal ulcer. Dr. Rowley excised an indurated ulcer 1½ cm. in diameter from the efferent loop of the jejunum 2 cm. from the anastomosis. The duodenal ulcer was still present, but nearly healed.

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DISCUSSION OF PAPERS OF DR. CHEEVER AND DR. LAMPSON.

DR. F. B. LUND, Boston: Dr. Cheever has read such a thorough and scholarly paper that there isn't a great deal to be said about it. I believe in the self-digestion of the wall of the stomach as the cause of ulcer, which is the view he has come to take. With ulcer is an associated hyperperistalsis which is induced by the presence of irritation in other parts of the abdominal cavity and far from the ulcer. Its association with chronic appendicitis is not to be neglected. The hyperperistalsis may have a causal connection. The presence of avascular scar tissue in the base of the ulcer, because epithelium cannot form over it, is also of the greatest importance to our understanding the pathology of the condition and a point in favor of the excision of the ulcer, where possible. To determine where it is possible requires a lot of judgment. Now, in ulcers of the duodenum, one cannot help having a great desire to treat those by pyloroplasty. In some cases we can get rid of the ulcer and do a Finney operation, but the majority of cases of ulcer that come to me are large and indurated, too extensive to excise, and if you try to excise them, you get into the pancreas. Those are the ones which heal best after doing a gastroenterostomy. A pyloroplasty won't get at one of these ulcers because it is on the duodenal side of it. I believe if they are on the anterior surface one ought to bore them out with a cautery and do a gastroenterostomy. Or, if operating for hemorrhage, a Finney pyloroplasty gives direct access to the ulcer.

The sleeve excision of the stomach in ulcer on the lesser curvature is a very attractive operation. It may be all right, but I personally have met with two cases in which hour-glass contraction of the stomach resulted after a sleeve excision. Personally, I think the thing to do with ulcers of the lesser curvature is Balfour's procedure of boring out with the cautery, suturing, then bringing the peritoneum over, and not forgetting to do a gastroenterostomy. There is no question but the change in the chemistry, by letting in the duodenal contents, allows these ulcers to heal.

With regard to jejunal ulcers, I firmly believe that we ought to give up linen sutures, in spite of the fact of what the doctor has said about the linen suture being, perhaps, not the cause. Even if they may occur within the linen

suture, what is the use of leaving a foreign body there which produces more granulation tissue to be worked on by the gastric juice? A fine, chromic catgut will hold just as well as anything, and when the end of the thread goes directly into the needle, one excellent to handle.

With regard to the excision of an ulcer, everybody has got to decide for himself. They may disappear after a gastroenterostomy, and if there is any question of the safety of excision, give the patient the benefit of the doubt.

With regard to ulcer as a cause of cancer, I hesitate to say anything about it, but I have seen a number of cases of cancer without any previous evidence of ulceration or disease. These cancers came on quickly, with no previous ulcer history, and most of them were inoperable by the time they got to the surgeon. We have all seen cases of ulcer go on for years without developing a cancer. So I take no stock in it as a reason to excise ulcers. For instance, Mieulicz, without knowing that he had an ulcer, developed a cancer which was inoperable when discovered. And one of the best surgeons in Boston developed a carcinoma on the lesser curvature, and by the time he discovered it, it was inoperable. We cannot deny the general principle of cancer developing from irritation, but the many cures of cancer without the slightest history of ulcer, and the many cases of ulcer which have not developed cancer, makes us feel that the danger of the development of cancer from ulcer is not very great. I have seen a few cases in the pylorus where I could not tell whether it was cancer or ulcer, and in those cases it is best to do an excision.

H. L. SMITH, M.D., Nashua, N. H.: Those of us who live in the back counties must look to you metropolitan surgeons, with your vastly more abundant material, to work out such problems as those of the best methods of treating these chronic ulcers of the digestive tract which the readers have so well discussed, and the technique to be followed in order to prevent such complications as sometimes occur at the jejunal stoma. But, nevertheless, we can, and should, make an intensive study of such cases as we have, and must read diligently the reports that come to us from the larger centers, reserving the right to draw our conclusions and employ our own judgment in deciding what procedures to advise in the cases under our care.

To me, at least, the present attitude of those most capable of giving an opinion is much like that of the committee which begs to report progress and is given more time before making a recommendation. In other words, as Dr. Cheever has told us, we have been too ready to believe that the surgery of the stomach had become completely stabilized—as much so, in fact, as that of the pelvic organs, and perhaps even more so than that of the gall-bladder.

But now, somewhat to our dismay, patients who were dismissed as cured come straggling back with the story that their sufferings have returned or that other and worse ones have developed. Naturally they demand an explanation, and now it is up to us not alone to discover the cause of our past failures, but to devise new methods, whether medical, surgical, or a combination of both, which may be relied upon not merely to relieve symptoms for the time being, but to effect a real and permanent cure.

Of course it would be presumptuous for anyone with a limited amount of material to be dogmatic on a subject where so many factors enter into the problem. Only the combined experience of many operators and the final result of many investigations and of much careful thought can give the right answer to the questions which the essayists have propounded. I shall content myself with suggesting certain reasons why we seemed all at once to be brought face to face with the fact that the work we have been doing has not been so uniformly fruitful in results as we had come to believe it ought to be. The explanation, as I conceive it, is to be found in the fact that when we began to apply the knife to the organs of nutrition we encountered at once new and almost unknown factors about the nature, function and importance of which we know all too little.

When the surgeon began to branch out, and assumed the rôle of the hydraulic and sanitary engineer; when, with a flash of genius, he first conceived the expedient of diverting, blocking, and otherwise rearranging man's irrigation and plumbing systems, a most wonderful field was opened up for exploration, and, in truth, it must be said, for exploitation. In fact, what could seem more reasonable than the cure of a diseased or obstructed pylorus by the simple expedient of diverting the flow of irritating juices through a cross-cut or canal, or of draining the miasmatic marshes of the stagnant colon by means of artificial channels; or even of flushing it out, and at the same time turning the joke on Nature herself, by using for the purpose one of the prehistoric vestigial remains which had been outgrown, but not yet eliminated, during the process of development, thus carrying along as a slight asset what would otherwise be a liability?

So long as the surgeon was merely a carpenter and joiner, and an "outside" man at that, limiting himself to repair work and physical reconstruction, it was fairly easy to develop a science of surgical artistry in which, within certain limits, definite results could be promised. And even when, made bold by success, he took on interior remodeling, he could do a fairly good job, and get away with it. He

could safely remove worn out or defective structural parts, build new entrances and exits, and that without disturbing unduly the regular routine of activities going on in the building.

But when he ceased to be contented with walls and partitions, and went into the kitchen, the laundry, the toilet, and the cellar, he soon found that his old set of rules would not apply. The action of vital forces has not yet been definitely reduced to a simple working formula. To solve any problem there must be as many equations as unknown quantities. The trouble seems to be that in the present discussion the X's and Y's and Z's are in excess.

When the first gastroenterostomies gave immediate relief to the hunger-pains of the man with duodenal ulcer, a new miracle seemed to have been wrought. But the "vicious circle" drove out the anterior operation and brought in the posterior direct attachment and the anastomosis "in Y," and now it is found that the real stomach ulcer, situated at a distance from the pylorus, and the second jejunal one, remain to trouble us.

Mr. Lane, with smiling insouciance, cuts and trims and splices, but many have found, to their sorrow, that in their hand at least the problem is something more than a mere plumber's job of wiping a joint.

Meanwhile we, who are on the back seats, looking to you on the floor of the arena, are diligently and hopefully watching your results, believing that in good time you will be able to point out for us where lies the path of safety and success for our patients and ourselves.

Original Articles.

HEMORRHAGIC OSTEOMYELITIS.

By Ernst H. Arnold, M.D., New Haven, Conn.

Several reasons prompt me to bring to your attention the above subject at the present time. Hemorrhagic osteomyelitis is apt to exist without symptoms subjective or objective and may go, therefore, unrecognized. Fracture without what would be to a healthy bone sufficient provocation may take place. A bone having thus been broken and hemorrhagic osteomyelitis yet not recognized as the remote causative agent, delayed or non-union may result.

If the lesion be situated near a joint which from the predilection of the lesion for spongy bone is likely to be the case, it may be mistaken for a joint lesion such as tuberculosis. Conservative treatment for the latter, braces for instance, have no influence on hemorrhagic osteomyelitis, whereas prompt surgical interference would speedily restitute the part *ad integram*. With the former the patient would face a long drawn out and inefficient course of treatment.

Finally, hemorrhagic osteomyelitis may be mistaken for a malignant bone lesion and drastic and mutilating surgical measures taken which would be altogether unnecessary.

In view of these reasons a recital of the nature and behavior of this condition together with the relation of a few illustrative cases may not be out of place.

Etiology. The condition is not very frequent. This infrequency is in part undoubtedly due to the fact that the lesion exists often unrecognized and undiagnosed. Its preference for spongy bone explains its occurrence in childhood and youth. I myself have not come across a case older than twenty-five years. The pathology being that of a process of repair, the injury to the tissue calling for repair must, in the absence of infection, be traumatic. That seems to be the case history as the history of trauma is frequently given.

Pathology. The gross pathology of the lesion usually presents a cavity in the spongy part of a long bone. When the formation of this cavity has progressed for some time it consists of one chamber of very regular, often oval outline. If bone absorption has not yet advanced much, the unabsorbed trabeculae may subdivide this chamber in several compartments. The cavity is found filled with a dark brownish mass of jelly-like consistency from which uncoagulated blood oozes. A membrane, brownish red in appearance, fairly thick, one-eighth inch or more, and which is very friable, lines the cavity. The cavity expands, driving the cortica before it, but unless there be spontaneous fracture, rarely ruptures through it. The lesion is noticed then as a swelling of regular shape, and smooth surface. There are no signs of inflammation, no reddening, no heat till the pressure from underneath causes the skin reaction to show these signs. Microscopically, the mass is found to be a hemorrhagic extravasation in which light colored areas consisting of young fibroblastic tissue are noticed. In these are found many multinucleated giant-cells of the foreign-body type of cell. They are derived from the fusion of leukocytes proliferated from vascular endothelium. The giant-cell formation is due to the presence of much hemorrhagic granular tissue. It is also favored by the necrosis in the extravasated areas. The tissue necrosis is likewise responsible for the appearance of fat globules in and around the endothelium cells. Numerous fibroblasts are seen forming collagen fibrils. Where the process becomes chronic this collagen formation is well marked, proceeding to fibrous contraction and cyst formation. This cyst formation and the presence of giant-cells were undoubtedly responsible for the view held in many quarters until quite recently, that the condition was one of tumor formation, bone cysts of this variety being classed as giant-cell sarcoma. However, it is now recognized that the process is one of a low

grade inflammation usually chronic in character in response to trauma. The giant-cells have not a tumor forming but as Barrie, who has done a great deal of excellent work on this condition, puts it, scavenger function.

Symptoms. There may not be any subjective symptoms. Pain is present only when the expansion has gone far enough to make the cortical support of ligament or muscle attachment insufficient. We have then, pain on joint movement in the first, or muscle contraction in the latter case. Likewise may there be absence of objective symptoms and the condition is only accidentally revealed either when x-rays are employed for other conditions in the neighborhood of the lesion or by the fracture of the bone. With the expansion, however, of the lesion, we have a distinct enlargement of the bone. Usually there is neither heat nor redness to be noted. Only when the pressure from below becomes keen do these set in. There may be enlarged superficial veins over the swelling due to pressure interference with the venous circulation. In the lower extremity limping may be associated with the condition. The condition being strictly a local one, no general symptoms such as fever, anemia or loss of weight need be looked for. Atrophy of the soft parts in the neighborhood is absent in the beginning and not particularly marked in the advanced states. If the lesion is very near the joint there is some limitation of movement but passive movement within the limitation is painless. Protective muscle spasms are absent or only slightly marked.

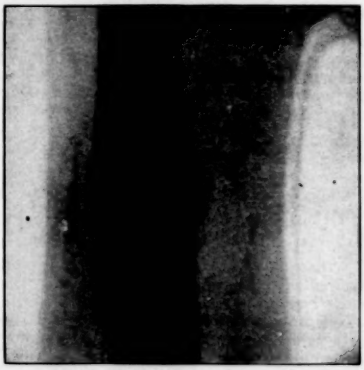
Diagnosis. The youth of the patient, the location in spongy bone, the history of trauma, the absence of marked pain, limitation of movement and muscle spasm, the long duration without exacerbations or metastasis make the diagnosis likely. The x-ray findings are sufficiently characteristic to confirm the tentative clinical diagnosis.

The x-ray shows a cavity usually very regular in shape, sharply outlined. The cavity shows no bone proliferation. The cortica, unless broken by violence, is intact. If broken, no bony tumor mass is shown outside the cortica.

The differential diagnosis is important in regard to malignant bone tumor (sarcoma) and bone tuberculosis. Hemorrhagic osteomyelitis has the age of the patient in common with both. The location is the same in tuberculosis and may be the same in sarcoma.

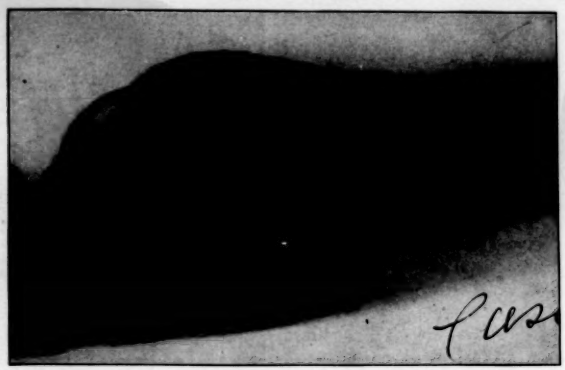
The history of trauma may be had in all three. The presence of early and great pain distinguishes tuberculosis and sarcoma from it. Limitation of movement is an early and constant symptom of tuberculosis; it is marked in sarcoma near joints. Muscle spasms are marked and constant in tuberculosis and sarcoma near the joint. The local swelling of tuberculosis is diffuse and involves the soft parts. In sarcoma it may be circumscript but is irregular. The tubercular joint is hot. Sarcoma and hemorrhagic osteomyelitis only show redness and heat when the skin becomes involved. Tuberculosis and sarcoma are progressive; hemorrhagic osteomyelitis may be stationary for years.

CASE I.



CASE I.

Atrophy of soft parts adjacent above and below the lesion is present in tuberculosis and sarcoma. It is absent in hemorrhagic osteomyelitis except where long disuse has brought it about. No fever or general marasmus is noticed in hemorrhagic osteomyelitis. The x-ray usually clinches the matter. Tuberculosis presents no cavity, sarcoma not one of such regular shape and smooth outline. Sarcoma involves the cor-



Case II.

tica, breaks through it and usually shows bony mass outside of it.

Treatment. A sufficient opening through the cortica to allow the complete curettage of the hemorrhagic membrane and of the whole cavity and recesses, if there be such. If the cavity is large, filling it with bone chips taken from adjacent healthy cortica is helpful. Suture of periosteum and skin. No drainage. No use of tissue destroying swabbing such as carbolic acid. No bone wax filling. Perhaps a mildly stimulating application of dilute tincture of iodine may be had. If the cavity be large and the cortica thin, some protecting splint must be worn even in the upper extremity. In the lower extremity a protecting and supporting brace is indispensable till the x-ray shows sufficient bone deposit in the cavity to prevent untoward accidents. The x-ray taken at fairly frequent intervals (six to eight weeks) will control the recovery and indicate when protection may be done away with. The prognosis is uniformly good.

HISTORY OF ILLUSTRATIVE CASES.

Case 1. Dates back to January, 1909, and is my earliest acquaintance with the condition. The patient, male, ten years, in poor health and flesh, injured left-upper arm several days ago. The injury was held to be a fracture by the attending physician. On examination, a distinct lump was felt between the middle and upper third of humerus. This was thought to be due to over-riding of fragments. The personal history related several injuries to the same arm previous to the present one; the last one about ten months ago. They were not, however, held to be fractures at the time. The x-ray revealed the lump to be an atrophic bone lesion, oval in shape and evidently cystic in nature, involving the medulla of the humerus. The appearance suggested a neoplasm which the history of the repeated injuries made likely. Exploratory operation was advised and done the same month, the plan being to be prepared to amputate should the gross appearance and fresh section examination show malignancy beyond doubt. At operation a cavity was found containing a blood-like mass and a hemorrhagic membrane. Specimens of these and bone chips from the wall of the cavity were taken for examination. There being no distinct sign of neoplasm the wound was closed after curettage and the arm splinted. The pathologic findings of Dr. Bartlett revealed no sign of malignant tumor formation but suggested a low grade chronic inflammation. A slow but apparently complete recovery took place. However, the arm was broken again, with little provocation, in the same place, in October of the same year. It was treated by splinting, after union, for some time by stimulating treatment, such as heat and massage. The patient is well today, the arm has completely recovered and no further difficulties with it have been experienced.

Case 2. Connects the lesion directly with injury. Patient, female, 24 years, seen January, 1920. In September, 1919, she fell, striking the front of the tibia below the knee on the edge of a trolley rail. The bruise promptly healed, but some time after a swelling was noticed at the site of the former injury. At the time of the first examination this swelling was about the size of a hen's egg, smooth to touch. The skin over it showed some pressure signs. The x-ray presented a cystic cavity with several compartments. The diagnosis of osteomyelitis hemorrhagica was made, and operation done. The cavity was filled with a gelatinous mass and lined by a hemorrhagic membrane. It was curetted and closed. A protective brace was worn for six months, a complete recovery was made, the patient is now well and about.

CASE III.

ARNOLD CASE III.

CASE 3. Seen June, 1920, has also the history of trauma, but whether the osteomyelitis found at the time of the first x-ray examination was the cause or effect of the injury cannot be told. Patient, male, five years, fell breaking leg, June, 1919. Since then the patient has been seen by quite a number of practitioners. He wears a protective brace but he limps with and without it, considerably. The tibia is bent to an angle of 150 degrees and there is a false point of motion. The x-ray shows an ununited fracture and bone cysts in the proximal fragment. The diagnosis—ununited fracture in presence of osteomyelitis hemorrhagica. At operation the lower fragment has its edges freshened. The upper fragment is found to have a cavity containing a bloody mass and a hemorrhagic membrane. This is curetted out. Opposition of fragments without suture, cast applied for six weeks, bony union promptly followed. A protective brace was worn, the patient is well and about, and the union firm.

CASE IV.

CASE 4. Illustrative of the possibility of lesion being mistaken for a tubercular joint. Patient, female, six years, in fair health and flesh, has been lame in left leg for upward of six months. There has been occasional pain, but not severe. There is no atrophy of the muscles of the thigh or gluteofemoral region, only rotation in hip is limited. The x-ray shows a large cystic area involving the region in the neck, trochanter and upper part of shaft. Diagnosis of osteomyelitis hemorrhagica was made. This diagnosis is confirmed by operation, the lesion being entered through the trochanter. A large cavity filled with a bloody mass and lined by a hemorrhagic membrane is exposed. Curettage was done. A supporting brace is worn and should be worn for some time for fear of fracture through the very thin bony shell remaining after curettage. The operation is followed by the cessation of pain and the limitation of movement. The lesion is filling in. The patient is well and about, though still, for above cited reason, on a supporting brace.

The Massachusetts Medical Society

ADDRESSES DELIVERED BEFORE THE SUFFOLK DISTRICT MEDICAL SOCIETY MEETING OF OCTOBER 26, 1921.

HON. B. LORING YOUNG: Each year the State through its legislative branch enacts many laws affecting the medical profession and the public health. The method of making these laws is as follows: The legislature is divided into committees appointed by the presiding officers of both houses, such as, for instance, the Commission on Public Health. Each year from 2000 to 2500 or even 3000 various matters are brought up by members of the legislature and referred to the appropriate committee by the presiding officers. Last year apout sixty matters were referred to the Commission on Public Health. Probably about 100 matters related to medicine and public health were brought up and referred directly or indirectly to the other committees, such as Social Welfare, etc. During my six years' experience in the legislature it has seemed to me that doctors of the state do not take the interest in these matters that they might well take. The people who are advocating these various proposals for legislation naturally try to the best of their ability to influence the members of the legislature. While the members do not like to be importuned too much or threatened with opposition if they do not agree and while they do not like to be asked to commit themselves to a measure, they are reasonable men and they want to hear all the arguments possible. Members of the medical profession have been too reserved and modest in communicating their views and advice to the various men who represent them. Men who are interested in new-fangled ideas, who desire to break down health standards, who wish that the practice of medicine might be permitted without any examination are always with us. They are very energetic and speak with the energy of fanaticism. I would be the last person to advise members of the medical profession to go in large numbers to committee hearings, but every individual is represented by one or more representatives and a State senator and those men are anxious to know what the intelligent, well-informed members of the community think about pending problems of legislation. I believe they are entitled to get advice and assistance in a larger measure than they have in the past. During the past few years the officers and the committees of the Massachusetts Medical Society have worked zealously at the State House. I recall the efforts made by Dr. Woodward, Dr. Worcester, Dr. Stone and Dr. Channing Frothingham and I am sure these efforts will count for far more if they are supplemented by the applied interest of the medical profession. Every member is glad to receive a letter from every constituent of his who knows about any pending subject. He is glad of that information for several reasons. In the first place politicians are anxious to please when they can please, and they are very glad if they can follow the advice of their constituents. In the second place they are particularly glad from the conscientious point of view to be informed of the intelligent public opinion of the State. Each year we have a great mass of legislation that comes in, supposedly to do with public health, the practice of medicine, the setting up of new boards, chiropractic legislation, vaccination, midwives and a manifold number of subjects which relate directly or indirectly to the public health and practice of medicine,—questions upon which the opinion of the medical profession is of more value than all the rest of the community combined, yet in nine cases out of ten the legislature does not receive any explanation of that opinion. We often hear people, not only of your profession but in other professions, condemn the process of legislation as not expressing the finest intellectual thought of the community. Usually this is because the people that really know have allowed the case to go by default. I know I am speaking for the legislature as a group and as individuals that they may have at their disposal the best thought and information that you, the trained profession of the State, have to present. The legislature asks for information, guidance, help from you upon all matters which relate to the public health and to the practice of medicine. You can gratify their wish and supply that demand first by backing up your officers and committees in any program they may propose and in the second place by getting to know as individuals the men both in the house and the senate who represent you and making them feel that you will give them all the information and knowledge which you feel they ought to have in order properly to consider these problems.

DR. JOHN BARTOL, *President of the Massachusetts Medical Society:* There came a pathetic letter of resignation to one of the district societies up the State in which the resigning member said he wanted to resign from the Society for two reasons, that he didn't want to belong to a society where he had to read the Journal and he didn't want to belong to a society run by the nabobs of the east. It wasn't pleasant to be put in that category, but following that came another letter from a member, also up State, not so very far removed from the first, expressing a similar feeling. There is something for us all to think about in those two letters. They represent a feeling which many of us have had for a long while, and which my predecessors in this office have met, a feeling that the State held a great many remote spots. We focus here in Suffolk and the nearby districts large numbers of members of the Massa-

chusetts Medical Society, but there are many outlying districts. The by-laws of the Society state that one of the duties of the president is to keep in touch with the district societies. That duty, so far as the president is concerned, becomes a pleasure. It is very delightful to move out through the State, to come in contact with the men doing pioneer work through the rural districts, spreading the gospel of advance. It is delightful to come in contact with the hospitable spirit with which they greet officers of the Society, but after the call of the president has passed what has been accomplished in the way of keeping those districts in touch with each other? Are they any nearer to each other than they were before? Does the Society crystallize all of these units? It is a homogenous body of active agents. That is the feeling that has always existed among the presidents of the Society. It came to a focus with Dr. Worcester. He determined, and it was practically his last official act, that a reform should be brought about toward bringing the districts more closely together and thereby bringing them into union with the mother society. Therefore at the last annual meeting, at his suggestion, there was put through a recommendation that the districts instead of being eighteen should at times be six. In other words, there should be joint meetings and these should be held this year. It is the hope of the committee that this arrangement will become permanent. What is the fundamental purpose? Not for the selfish purpose of advancing the interests of the society itself by making it appear important in the public mind. It was with the object of making the society more useful to the individual members. These two letters that I speak of reflect in a measure the sense of loneliness which some of the district members feel. When it comes to legislative matters they feel very vague. They don't know what is going on at the State House. Naturally, they don't do anything about it. They have business of their own. They don't write letters to their representatives or go to see them, and the task of doing that comes upon the committee of the society. That committee is assisted by an auxiliary committee throughout the State. They function in a very effective and helpful way but they are a mere handful of men. There are in the House 240 members and in the Senate 40. How many of those can be appropriately interviewed by a handful of committee men? I do not advocate taking any burden from this committee but adding to it 3900 members. The Society has very nearly 3900 members. There is no reason why they shouldn't all be on this committee. The medical man should not feel that he is allegating to himself superior knowledge if he tells his representative that certain things are facts. Who is to tell him better than his own family physician or his own townsman who stands for the best medical knowledge in the community?

So far as impending legislation goes, certain things always impend; the antivaccinationists are always with us. Last year their bill passed the Senate, and was jeopardized in the House. Opinions must be crystallized on questions like maternity legislation. This question is not simple. Of course, all physicians favor prenatal care and postnatal care, but beyond that there may be great difference of opinion. Therefore, it is necessary to talk about these things in meetings in order that we may exert our influence as a body. It has been said that although legislation of a harmful nature had been warded off, little had been accomplished of a constructive nature. This may be true. There is danger entering upon a campaign of constructive legislation. We are fearful of the entering edge of a wedge when it is difficult to see what the broad end of the edge will be. It might safely be said that it is a wise spirit of conservatism for the Massachusetts Medical Society not to burn its fingers too much in constructive legislation. It is, however, not fair to say that constructive legislation has not been accomplished in the past. The present law of registration in medicine was brought about by means of this Society. It is hoped to improve the bill further by providing for the protection of students in reputable medical schools who, in the process of gaining their education, are obliged to practically practice medicine. At present they are not protected.

DR. EUGENE KELLEY: One point I would like to bring out is the reaction of the medical mind toward the field of public health. Until recent years the organized medical profession did not take it upon itself to train men from their own ranks as sanitarians. Only recently have schools of public health been established, showing that that time has gone by. A number of years ago I attended a large gathering in which one of the most striking and radical addresses was delivered by an engineer. The thesis of his address was that public health is not a medical monopoly. His audience was predominently medical men. The gist of his argument was that the medical profession maintained that they were the naturally constituted class to develop public health. They hadn't done it, therefore others would do it. I cite this incident not because I think his views were complete but because of its analogy in this matter of medical legislation.

Regarding the lonely feeling mentioned by the previous speaker, I can appreciate this deeply because, although I am proud of my medical training and of the fact that the medical profession is behind me, a good deal of the time we don't know whether they are or not and nothing comes from the medical profession to let us know. I can testify, too, to the

amount of cooperation we have received from Dr. Bowers, Dr. Worcester, Dr. Woodward and other prominent members of the committees, but as to the opinion of the profession in general toward matters in which we were concerned, we knew no more than the average legislator. The view point in public health legislation ought to be medical. It is in grave danger of becoming less and less medical every year. There are several millions in this country who have decided convictions on public health topics, and whether we like them or not some of those convictions are going to be translated into legislative action. I once heard an able leader of her organization, in the far west, asked at a gathering, why in her State they came so suddenly in the course of two years to have the suffrage extended to them, whereas there had been an active organization for twenty years previously that had accomplished nothing. Her answer the medical profession can take to heart.

"We did blunder along for twenty years and got nowhere, and then we learned two very important truths: if you are going to get anything done in the way of legislation you learn in the first place to renounce the impossible, and, in the second place, to cooperate cheerfully with the inevitable. When we took those things in consideration, to our amazement we accomplished almost at once what we had been striving for for many years."

In connection with what Dr. Bartol said about constructive legislation, I may say that we are not given credit from the average legislator for the great progress we have made in the practice of medicine. We know the public benefits, but no credit is given us because that is considered a move toward class legislation, it is promoting the interests of the "medical trust." The criticism is often made, not altogether justly, that when the doctors come out in full force it is always in opposition.

As a practical suggestion I may say that the most useful thing the medical profession could do for us would be to bring to the council table of the Department of Health certain definite ideas as coming from the whole medical profession. Nothing could be of better advantage to the Department than to frame up sane and reasonable recommendations for legislative action from year to year. We should have a definite, concerted opinion on subjects before they come up for action from the local societies of the State. I strongly hope that a day will come when the crystallized, carefully thought-out and possibly unanimous opinion of the medical profession on public health measures can be brought up to the Department of Health, so that we can accomplish something that we can feel is suitable and represents the sentiment of the medical profession, which is constructive legislation in the highest sense of the word.

Dr. Charles F. Painter: Such experience as I have had in the last nine or ten years in visiting the legislative committees in the hope of influencing them and in interesting the medical profession in the action of the General Court has been discouraging for the greater part of the time and, I have no doubt, is due to the fact Mr. Young has pointed out, that there hasn't been enough backing from the profession as a whole. With that in mind I want to make one suggestion which the committee to which I belong has had under consideration, which we offer as a part of a new plan. The idea is based upon the manner in which the American College of Surgeons have been conducting publicity meetings in the interests of the hospital standardization scheme. Throughout the States of the Union societies have been organized which are trying to gain the interest of the public in all matters concerned with this standardization of hospitals. A public meeting is held and in advance of the meeting a walking delegate calls on the influential people of the community to enlist their interest. The newspapers are asked to cooperate. These meetings are attended to from 2000 to 3000 people and have been a success. Since the district meetings have been grouped so that there are six, we could put into effect a similar scheme. I do not believe in waiting until the legislature is in session. There are matters which will come up to the legislature which we must wait to know about, but on certain things we can instruct the public beforehand. I believe that if this scheme is followed out, if the district societies will arrange for a semi-public meeting at which the Society will provide competent speakers who will speak on the subject that is going to come up, and undertake to instill into the minds of the public what the profession is standing for, and if at those meetings the local committees see to it that the influential people of the community are invited, an audience can be secured which will do much good. I am sure we could create an organization in a small State like Massachusetts which could exert its influence at very short notice.

Dr. James S. Stone: Medical public opinion is not organized and does not have influence because it is unorganized. There is no need of going over the subject of vaccination or vivisection or the physical education of school children, or the provision for school nurses. These last two measures are now law and it is our duty as physicians to see that those laws are carried out sanely and that the efficiency of the school nurses is not to be measured solely by the number of tonsils which they induce parents to have removed from the children. You who have not been to the State House to hearings have no idea of the sincerity of fanaticism and of the absolute unwillingness to see straight

that certain people show who go constantly to these hearings. All their influence must be counteracted by the diffusion of the special knowledge which we have among the members of the legislature. These joint meetings are going to help a great deal. The credit for that idea belongs to Dr. Worcester. The credit for having special meetings to discuss legislation belongs to Dr. Mongan, of Somerville. We know that there are certain things that are going to come up at the next meeting of the legislature and other things that may come up on which medical opinion ought to be forming to-day. A year ago the New England Surgical Society passed a resolution regarding the question of the requirements for the training of nurses, whether they were not unduly high, and that the length of time might be lessened somewhat from three years. The fields of work that have opened to nurses have absorbed a great many graduates of our hospitals. The war and industrial conditions have made a great difference, but readjustment will tend to restore the balance. Nearly two years ago Mrs. Coolidge introduced a measure in the legislature, which did not pass, providing for the licensing of attendants as well as for the registering of nurses. Has the medical profession an opinion on that? Dr. Worcester brought forward the proposition that nurses might be trained to practice in certain branches of nursing, then to come back for further training in other branches. Is that the answer? In these things the public has a right to look to the medical profession for leadership. To-day persons in moderate means cannot, in case of sickness, afford for long to have a trained nurse. What are we doing to provide means whereby the person of moderate means may be cared for in case of sickness? Medical opinion has done nothing to help the public in this matter. The question of medical and premedical education is going to come up before the coming session of the legislature. The requirements are two years of college work, but, to put ourselves in the position of the members of the legislature, we may ask the questions which they ask. Are there ways in which our medical schools are not fulfilling the duty which they owe to the community? The number of our medical schools has been cut down. Few of us want to see them increased, but are those which are left fulfilling the needs of the community? What schools to-day are supplying the doctors who can go into the country towns and practice? Osteopaths and chiropractics come to fill a vacuum, not create a demand for their services. There is a demand which is not supplied by our medical schools. Not that we want to lower the standards. We know that the study of medicine requires adequate premedical education, but all have the right to ask whether our medical schools to-day are fulfilling their full duty to the community, and I don't hesitate to say that in my opinion they are not.

One of the most important matters that is going to come up is maternity aid, and I am going briefly into the history of that movement. Several years ago Miss Spencer, a daughter of a physician, moved, as she stated, by the distress and suffering which came to the families of the poor with the birth of a new baby, introduced a measure providing for financial aid during confinement and, if necessary, medical and hospital care. Her measure was simply a poor relief measure and was advocated as such. When the passage of that bill seemed imminent, Mr. Young, then chairman of the Committee on Ways and Means, proposed another bill largely as a means to put off this Spencer bill. Mr. Young's measure proposed that, regardless of financial conditions medical advice be given to mothers. He advocated his bill as a health measure. Both these bills were defeated and both were opposed by the medical profession as a whole, although the medical profession preferred the Young bill to the Spencer bill, the health measure rather than the poor relief measure. Then came the appointment by Governor Coolidge of the maternity commission, which consisted of the president of the Massachusetts Medical Society as chairman, the commissioner of public welfare, the commissioner of public health, a woman, and one other member who was an advocate of the so-called Spencer bill. The commission, with its various opinions, presented a unanimous report. It advocated prenatal care as the means of cutting down a mortality of 600 to 700 mothers a year, about 39 per cent of which they regarded as preventable. During this same period the statistics published by the State Department showed a steadily increasing maternal mortality an increase of 70 per cent from 1901 to 1917. Whether that increase is due to better recording and classification of deaths, I will not discuss now. However, the Massachusetts Medical Society appointed a special committee to investigate the topics of maternal and infant welfare. This committee has presented certain preliminary reports and recommendations. Most of the medical profession would agree that better prenatal care is the first need in obstetrics, yet I do not believe that the medical profession as a whole would follow the special method of carrying out the recommendation which the maternity commission suggested. There are other ways in which the better prenatal care can be furnished than by supplying free nursing under the supervision of the State Department of Health. Existing hospitals can be developed. Who supervises our lying-in hospitals? How are they licensed? Years ago the supervision and licensing of lying-in hospitals was placed under the charge of the old board of charities, now the Department of Public Welfare, in order to prevent baby farming. The licensing is still done by the Department of Public Welfare with the local board of health. Do these hospitals meet standards?

I am not asking the medical profession to recommend legislation. Most of us are opposed to legislation which interferes with our practice or which in any way is an entering wedge toward State medicine. We can bring forward constructive suggestions, but they need not necessarily be along the line of legislation. If they carry out the purpose which is aimed at by those who advocate legislation our propositions will carry tremendous weight. If we can organize public opinion, and support the Massachusetts Medical Society, making the Boston Medical and Surgical Journal an organ of discussion and expression, our position may be very strong indeed.

Dr. W. P. Bowers: The first speaker, Mr. Young, said that his experience had demonstrated to him a definite apathy on the part of the medical profession in matters relating to legislation. Those who have been active in representing the medical profession in legislative matters have been very much concerned over that apathy and having been associated with the men interested in this object for the last eight years I can agree with him. I can see here fewer men than I can count on the fingers of two hands who have taken active part in attempting to instruct the legislature in their duties and privileges as representative of the people.

This matter of legislation relating to medical education has been before the legislature for many years, and little has been accomplished, although during the last two years, under the leadership of Dr. Frothingham more attention has been paid it than ever before. This is one of the most important matters before the legislature. The next most important subject is the transfer of the licensing of the lying-in hospitals from the Department of Public Welfare to the Department of Public Health. The maternity question has divided the Massachusetts Medical Society and we cannot expect to progress along that line until there has been laid a foundation of information and knowledge. If the licensing of lying-in hospitals is transferred to a board or department which has the proper knowledge for the supervision of these hospitals, one constructive step would be taken. The protection of medical students must be arranged for. During the course of their medical training they are assigned to the care of cases under the direction and supervision of the instructors in the schools. They carry out certain directions and institute certain treatments of a very simple character, but which are not protected by the laws of the Commonwealth. The president of the Society has given me permission to speak on this subject and draft a bill which, if I were a member of your district I should move to be presented to the committee on legislation with instructions that it be presented to the legislature. The text of the bill is as follows:

An Act to Provide for the Registration of Medical Students for the Limited Practice of Medicine.

An applicant for limited registration under this act who shall furnish the Board of Registration in Medicine with satisfactory proof that he is twenty years of age or over and of good moral character, that he is enrolled and has creditably completed not less than two years of study in a legally chartered medical school in good standing, which medical school has the power to grant degrees in medicine, and that he has been assigned to the care and observation of persons needing medical service, by a teacher in a medical school as defined in this act, may upon the payment of a fee of one dollar be registered by said Board as an assistant in medicine with the right to sign birth certificates and perform such service as may be delegated to him by his instructor under the following retsrictions:

"Such registered assistant in medicine may not by himself alone use or apply any narcotic drug as defined in the Statutes of this Commonwealth relating to the possession, application or distribution of narcotic drugs, nor advise or employ any treatment for diseased conditions, nor perform any operation which is or may be conducted by the use of instruments other than those which may be necessary in dealing with normal cases or those used in the examination of patients for the purpose of making a diagnosis, except in the presence of and under the supervision of the instructor in the medical school of which he is enrolled.

"Such assistant in medicine may not sign certificates of death.

"Nothing in this act shall be construed as preventing the employment of any measure for the relief of suffering or prevention of death in an emergency whenever it may be found to be impossible to secure the services of a registered physician."

Dr. Channing Frothingham: The problem of what to do with the various cults is a serious one. These cults are composed of uneducated people, as a rule, and they want to have the bars let down so that they can make money with a limited amount of knowledge. It is, therefore, important to have some idea what these various cults are so that we can intelligently tell the legislature whether they ought to enable them to flourish in the community. I have been investigating osteopathy and chiropractic. Osteopathy was founded by a doctor who was a graduate of medicine and at one time a member of the Army Medical Corps. It depends on a theory. It is not clear to me from my reading whether that theory came first or whether the doctor developed the theory as a result of treating successfully a few patients.

The theory is that the body provides all the elements for health. If circulation in the body is proper health will persist. Therefore ill health is the result of impairment of circulation, which is impaired by the action of the vasomotor apparatus. This, in turn, is impaired by direct pressure of bones, muscles, ligaments, reflex action or a disturbance in various organs. More recent books use the term "inhibition." Inhibition is a procedure to relieve pain. According to the original workers in this subject there is no need for regular medical knowledge. All that is necessary is to find the impairment of circulation, relieve it and health will result. There is no experimental or external proof that gives support to this theory. The gradual trend of osteopathy seems to be away from this theory so far as they believe that no knowledge of medicine is of value. Therefore it is important not to accept osteopathy from this theory but to find out what osteopathy is to-day. It is a therapeutic agent in the field of medicine. Their own books say so. They compare osteopathy with drugs. Their books would imply that the ordinary physician has no other therapy than drugs. In Tasher's book on osteopathy he says that surgery is in the field of osteopathy. If he is to do surgery he should be no less educated than any other medical man. The law of Massachusetts says that the practice of osteopathy is the practice of medicine, and therefore we are justified in assuming that it is a therapeutic agent to be applied in the practice of medicine. This consisted in relief of the osteopathic lesion. The lesion is situated along the spine. It may be the result of a combination of events and consists in the subluxation of the joints of the spine. If the lesion cannot be demonstrated it is easily accounted for by being so slight that it can't be demonstrated. Together with the subluxation there is spasm of the muscle. The examination, therefore, simply consists in examining the spine for muscle spasm and a tender point and some subluxation of the joint. There is also indication of disease in an organ. For instance, there would be indication in the spine of disease of the kidney, but the lesion would be the same regardless of the disease of the kidney. The osteopath believes that this lesion is present in all diseases. An osteopath who appeared before the committee of which I am a member was unable to demonstrate to us the presence of a definite lesion in certain cases, in others he was able to demonstrate such a lesion recognizable by others of the committe. The question of whether the osteopathic lesion is present in all disease would be very simple to prove and is a problem which the medical profession should settle. It can be easily done by proper study. The treatment of disease by osteopathic methods is the elimination of the osteopathic lesion. That is done by manipulation. They claim that their treatment is effective in a variety of general diseases in addition to the more specific diseases in which they do most of their work. They will help typhoid fever and pneumonia by manipulations of the spine. So far as I can find out there is absolutely no proof that they can do it. Their books speak of individual cases but I can find no comparative statistics. On the other hand, we must admit that the osteopath is successful in the relief of discomfort in certain kinds of conditions, such as backache and fatigue. How is it done? I don't believe they know. It isn't clear just what they do. The medical profession should find out how they accomplish their results and include it in the medical curriculum so that it can be done by people who know what they are doing. The solution of the problem is to keep the osteopath a doctor. The more educated the osteopath becomes the less he talks about osteopathic treatment and the more he talks about general medicine. Improve the standards of admittance to practice so that osteopaths will be obliged to be educated along general lines. Avoid intolerance. More has been done to help the osteopath by persecuting him than by any other way. Admit that there is something in osteopathic treatment as a therapeutic agent in a limited number of cases. Find out what it is.

Regarding chiropractic, the science was founded by a layman, not by a doctor—rumor has it by a man who drove the buggy for a successful osteopath. This cult is also founded on a theory, which is that all disease is due to the pressure on nerve roots as they emerge from the spine. Relieve that pressure and health results. All the knowledge of medicine is entirely unnecessary. All that is necessary is to know how to manipulate the spine. It is hard to believe that the teachers in chiropractic are sincere. In one school alone there are 2000 pupils. They charge what amounts to about $300 a year and teach anatomy of the spine, palpation of the spine, interpretation of X-Rays of the spine, how to adjust the malposition of the spine, and then a very important and well organized feature of their course is how to advertise. They have been admitted to the practice of chiropractic in various States. When pressure is brought on our legislature to let the chiropractor practice in Massachusetts, don't drive him out, welcome him in on the condition that he will pass the State board of registration, then make the examinations in Massachusetts so that they are worthy of the name. The chiropractor then will be an educated man and he will not practice chiropractic.

THE SIXTH JOINT MEETING OF THE DISTRICT SOCIETIES.

A JOINT meeting of the Norfolk, Middlesex South, and Norfolk South District Medical Societies was held on November 29, 1921, at the

Tufts Medical School. About 250 members were present. Dr. C. D. Knowlton, of the Norfolk District Medical Society, presided.

Dr. John W. Bartol, President of the Massachusetts Medical Society, was the first speaker. He urged the individual doctor to approach the legislators in his own district concerning bills relating to the practice of medicine, to explain the physician's point of view, and thereby influence them before they vote. He also pointed out the doctor's opportunity of educating the ordinary voter on medical questions, because of the fact that the doctor enters so many homes and entertains the confidence of his patients.

Dr. Mongan, of Somerville, gave a heart-to-heart talk on his personal experiences with bills, legislators and lobbyists. He discussed the recently passed maternity bill, and compared it with the bill as it was first drafted.

Dr. Arthur N. Broughton spoke on Health Insurance and Workman's Compensation — a subject in which he has always been deeply interested. Dr. Walter P. Bowers informed the members that THE BOSTON MEDICAL AND SURGICAL JOURNAL will take special pains to list all bills of medical importance about to come before the Legislature. This will be done in order that the physician may have ample opportunity to speak to his representative and attempt to mold his opinion.

Dr. Eugene R. Kelley, Commissioner of Health of Massachusetts, spoke very forcibly on matters pertaining to legislation, and emphasized the fact that very few now-existing laws help the medical profession materially.

An annual joint meeting of the same three districts was recommended for next year. A buffet supper was served after adjournment.

Twelve new members were admitted to the Norfolk District Medical Society on November 3, 1921, as follows: Thomas M. Connel, Walpole; C. Henry Dobson, Brookline; Henry S. Finkel, Dorchester; Genevieve Gustin, Wrentham; L. Foster Johnson, Norwood; Jacob C. Kaplan, Dorchester; Henry A. Kontoff, Dorchester; Martin W. Peck, Psychopathic Hospital; Herman Robbins, Roxbury; Martin H. Spellman, Roslindale; M. J. Stone, Dorchester; C. C. Weymouth, Medway.

JOSEPH I. GROVER, M.D.,
Correspondent for the Norfolk District Medical Society.

Book Reviews.

Practical Tuberculosis. By HERBERT F. GAMMONS, M.D., St. Louis Mo.: C. V. Mosby Company, Publishers.

This book of Dr. Gammons is a short volume of 154 pages, containing twenty-eight small chapters and a few illustrations. The type is clear and the subject matter arranged in clear and readable style.

Dr. Gammons has had a long and varied experience in the diagnosis and handling of all forms of consumption, both in the East and in the West. His experience, therefore, is of value. He realizes that the great burden of the diagnosis of tuberculosis rests with the general practitioner, and that if we are to make advances in this regard it is toward the general practitioner that we must direct our efforts. To the specialist or advanced student in tuberculosis much of what he says here may seem somewhat elementary or at times crude. For such, however, this volume is not intended; while to the general practitioner who has neither the time nor the inclination to delve into the 10-pound, ten dollar, one thousand page volume, this little book of Dr. Gammons' will be of real assistance. He has used plain, simple language and tells frankly what he himself has found to be of value.

There is a personal element in the book which adds greatly to it. This volume is a distinct addition to our literature on the subject.

Practical Chemical Analysis of Blood. By VICTOR C. MYERS, Ph.D. St. Louis: C. V. Mosby Co. 1921. 121 pp.

This book is essentially a description of eight methods of blood analysis used in the author's laboratory, *viz.*, Van Slyke's method for plasma bicarbonate and the author's modification of standard methods for non-protein nitrogen, urea, creatinine, sugar, chloride, and cholesterol. A brief discussion of the clinical significance of each of these constituents is included, sufficient to introduce the subject to anyone not yet familiar with it, but too fragmentary, and from the historical standpoint often too misleading, to serve any more ambitious purpose.

Considering the size of the book, and the fact that it is almost wholly a reprint of journal articles, the price is out of proportion to its value.

The Practical Medical Series (CHARLES L. MIX, General Editor). Vol. 1, *General Medicine.* Edited by FRANK BILLINGS and BURRELL O. RAULSTON. 630 pp. Chicago: The Year Book Publishers.

This year's volume of this well-known publication is similar to that which has appeared in recent years. The contents consists of summaries of selected papers that have appeared during the year. There are but few editorial remarks. The volume, desirably small in size, offers an opportunity to keep abreast of the progress of internal medicine.

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THE PRACTICE OF MEDICINE BY NURSES.

COMPLAINTS are being made that nurses are practicing medicine. Some of these reports are vouched for by men who are not personally affected by such practice but who feel that a real perversion of the functions of a nurse is sometimes shown, and other reports seem to be based on suspicion or misinterpretation of acts committed. As an example of pernicious assumption of function, a nurse employed in an industrial plant was asked to attend a man whose hand had been struck by a piece of flying metal. She dressed the wound and repeated the dressings from time to time. The patient became concerned about the behavior of the parts involved and asked the manager to have a physician consulted. The manager opposed this suggestion and assured the patient that the nurse could attend to the case as well as a doctor. Subsequent investigation showed a piece of metal embedded in the tissues and a suppurative wound, which was regarded by the physician as serious because of indications of spreading sepsis. This is a clear case of illegal practice, and should be dealt with by the police machinery of the state, and the nurse brought before the court, as provided by law. Physicians and others interested should report all cases of this type to the prosecuting officers of the municipality in which the wrongdoing is carried on.

On the other hand, physicians should carefully estimate the nature of the work performed by a nurse, so that injustice may be avoided. This is illustrated by the activity of two physicians who became suspicious of the quality and character of the service rendered by a certain nurse as carried on in a sparsely settled community. These complaints were submitted to the agents of the Department of Public Safety, who in turn, conferred with the District Attorney. He invited the complaining physicians to appear before the Grand Jury, and summonses were served to all parties who seemed to have knowledge of the facts. According to the District Attorney, "some eight or ten witnesses" were heard. The complaining doctors did not attend the session of the Grand Jury.

In a letter to the Board of Registration in Medicine, the District Attorney states:

"The facts are as follows: Some time last spring, Miss ———, in the employ of the Red Cross, was sent to ——— and has a territory covering a large area in the western part of ——— County. She has classes in home nursing and first aid work in a number of the hill towns. I found in a number of cases she had been called in by some of the families in the hill towns, in some instances in quite destitute circumstances. In some instances she had merely rendered first aid in the case and then had, in every case, advised them to summon a physician. In one or two instances she had carried the person to the doctor in her own conveyance, and in other cases she had summoned the physician herself. In no instance has she prescribed medicine, nor attempted to prescribe medicine, and in every single instance among those whose homes she had been in, she had insisted on having a doctor called.

"Then developed certain evidence that made it look rather bad for the doctors, or at least for one of them. One witness testified that, in one instance, he called Dr. ———, and he was unable, or refused, to attend. That they then sent for the Red Cross nurse. She went to the house, saw the condition that the member of the family was in, and she immediately told them to call the family physician. The party went to see Dr. ——— himself, personally, and Dr. ——— then stated that 'If they had the nurse or allowed the nurse to come to the house,' that he 'would not make the visit' to witness's home under any circumstances, 'even if it was a case of broken leg, or where a person was dying.' Similar expressions from other witnesses were brought out in the case.

"The character, work and reputation of ———, the Red Cross nurse, is beyond reproach. She is apparently loved by the people of the community, and the work which she is doing is nothing more or less than similar

work which is being done in all of our communities. Her efforts for the benefit of the community are tireless.

"It was shown by evidence that she was called, over the telephone, for assistance at the same time the doctor was summoned in a case of childbirth. She responded, rendered what assistance she could, and was there for several hours before the doctor saw fit to put in an appearance.

"In reference to the Red Cross nurse, ———, there is not a single instance, in the investigation before the Grand Jury, where she has exceeded her rights or her authority. One of the witnesses stated to the Grand Jury that she was a 'God-send to the community.'"

Although all physicians may properly feel concern whenever the field of medicine is invaded by one not authorized to practice, or where there is ground for suspicion that the rightful opportunities for earning a living are wrongfully curtailed, it is equally incumbent on physicians to estimate the value of a nurse's service to a community in a broad way. There is a border line on which even a well-intentioned nurse might inadvertently step, but even assuming that an error has been committed, if it was not the result of deliberate purpose, the better plan would be to advise, and avoid drastic action until evidence tends to show lack of ethical purpose. The great majority of nurses are earnestly trying to practice in accordance with recognized rules of behavior. In the report of conditions in the section alluded to by the District Attorney, the nurse has emerged from the contest with credit. Humanity demands that the needs of the people must receive due consideration.

THE COMMITTEE ON PUBLIC HEALTH OF THE MASSACHUSETTS MEDICAL SOCIETY.

Among the important questions coming before the Council Meeting next February is one relating to the scope of the work under the direction of the Public Health Committee.

Under the leadership of Dr. Enos H. Bigelow this committee has carried on valuable educational work for the state, and is planning for a campaign next year, but will need a reasonable appropriation.

Several years ago, a voluntary committee raised about twenty-five hundred dollars and placed it at the disposal of the Massachusetts Medical Society for Public Health Work. A full-time health officer was employed and an analysis of health conditions was made of certain parts of the state. It was felt that his work was valuable. This agent left us to take up similar work in California, and after the money was expended the Committee held health conferences in different parts of the state, from time to time, under a limited appropriation of the Society.

The Committee feels that the Society may properly spend more money than has hitherto been appropriated, and Dr. Roger I. Lee, one of the members, has authorized the Journal to express his opinion that an appropriation of five thousand dollars annually is none too much for the Society to spend in this work.

Members of the Society should consider the plans of committees, and if found worthy, stand behind those who represent us in the present plans for constructive work.

There is a feeling on the part of some of our members that the rebate to District Societies should be large, but any return of money to the districts should be of normal proportion and designed to stimulate prompt payment of annual dues, as well as to assist in meeting running expenses.

If the parent Society is to enter upon a program of education, it should be ready to spend money to any reasonable extent, and members should be willing to bear a large proportion of the expenses of their District Societies. Every dollar spent in education robs the proponents of socialistic schemes, of much of their ammunition and relieves the general practitioner of the fear of state medicine. The more we, as a society, do for the state, the less the state will have to plan for taking over the problems of the practitioners.

Many members of the Society feel that those who participate in social functions should meet the expense, to a great degree, and leave the treasury funds to be used for those objects designated in the charter.

A pertinent question may be whether or not we get more satisfaction in working together for the public welfare or in the social features of our gatherings. The development of social relations in a scientific body are valuable in so far as they bring members into effective co-operation in prosecuting the work for which the society was organized. During the war we gave until it hurt. We are dedicated to a conflict which is bringing good to mankind, but has no end.

If we cannot all give direct service, most of us can contribute funds through the Society.

JOURNAL AFFAIRS.

At a recent meeting of the committees of reviewers and abstractors having in charge the production of the Journal, it was suggested that regular Reports of Progress be published. A schedule has been planned to be published in order, under the following divisions: (a) General Surgery, (b) Internal Medicine and Gastroenterology, (c) Gynaecology, (d) Pediatrics, (e) Rhinology and Pharyngology, (f) Orthopedic Surgery, (g) Neurology, (h) Syph-

ilology, (i) Internal Medicine Pulmonary Disease, (j) Urology, (k) Dermatology, (l) Obstetrics, (m) Physiology, (n) Psychiatry, (o) Internal Medicine Diseases of the Heart, (p) Internal Medicine Diseases of Blood and Lymph Glands.

The success of the plan depends on the cooperation of the contributors. A list of competent writers has been selected and as soon as the plan is in operation the details will be published.

Another element is essential to success. That is, that the JOURNAL should be read. The JOURNAL is constantly receiving requests for information about matters which have been published. We are, however, always ready to supply all information in our possession, even if the facts have already appeared, for even a close reader may forget dates and details.

SMALLPOX.

THE reports published by the United States Public Health Service show that for the week ending November 5, 1921, there were 114 cases reported. For the week ending November 19, 1921, there were 580.

From September 1, 1921, to November 22, 1921, there were 231 cases in Kansas City, Missouri, with 75 deaths. The indications are that the cases now occurring are of a more malignant type than has been seen for many years. We know exactly what the anti-vaccination proponents are planning to do about this situation. What do physicians propose to do?

What would Kansas City have done if its dilemma could have been known in advance?

CONTINUATION STUDY FOR PRACTITIONERS.

A VERY interesting and stimulating suggestion in regard to post-graduate teaching has been offered by John M. Dodson, Dean of the Medical School, University of Chicago.

Dr. Dodson divides those who desire post-graduate work into three classes: "(1) Those seeking facilities for advanced and research work as graduate students in the accepted university sense; (2) Those desiring to fit themselves adequately for the practice of a specialty, and (3) Those who expect to remain in general practice but seek to refresh their knowledge of the old, and to acquire knowledge of the newer facts and methods in medicine."

The first two classes are cared for by the opportunities now offered by the larger medical universities. Dr. Dodson points out very clearly the iniquity of attempting to turn out a specialist in a few weeks or months, and states his belief that two or three years are needed for such training.

For the third class, the general practitioners who expect to remain general practitioners, but who wish to keep their mental equipment keen, well-ordered and up-to-date, there are at present very few opportunities. The larger medical centers are too occupied with undergraduate teaching to allow the establishment of courses for the general practitioner.

There are in the United States at least four hundred general hospitals, of one hundred or more beds, not now engaged in teaching. Dr. Dodson's suggestion is that these hospitals be organized as teaching and study centers for the physicians of the vicinity. He advocates the establishment of courses lasting from six weeks to six months, devoted to the reviewing of the fundamentals of medicine—anatomy, physiology, chemistry, pharmacology, physical diagnosis and of laboratory tests. The teaching is to be done by the hospital staff, and the facilities of the hospital—the laboratory, the library, and the wards—are to be utilized.

Dr. Dodson makes the further suggestion that brief services as interne should be offered to those general practitioners who wish to come again in contact with a clinical service.

These suggestions contain food for thought. The pessimist will see at once many obstacles to the success of such a plan. The greatest difficulty would seem to lie in securing as teachers men who can and will really teach. The more successful and presumably the abler men on the staff are likely to be too busy to teach, unless teaching offers them some remuneration, either financial or honorary.

The scheme appears to be rather idealistic, yet one can easily imagine it in very successful operation, provided the will to succeed animates the hospital staff. Without question, the effect upon the hospital and upon the members of its staff would be most salutary.

MEDICAL NOTES.

THE following named states passed laws accepting the Sheppard-Towner Bill: Delaware, Minnesota, New Hampshire, New Mexico, Pennsylvania, and South Dakota. Other states will be empowered by the Governor in anticipation of legislative action, to authorize a state agency to coöperate with the Children's Bureau until the legislature convenes and acts.

DURING the week ending December 3, 1921, the number of deaths reported was 196 against 207 last year, with a rate of 13.49. There were 28 deaths under one year of age against 30 last year.

The number of cases of principal reportable diseases were: Diphtheria, 74; scarlet fever, 36; measles, 61; whooping cough, 2; typhoid fever, 2; tuberculosis, 66.

Included in the above, were the following cases of non-residents: Diphtheria, 1; scarlet fever, 1; typhoid fever, 1; tuberculosis, 26.

Total deaths from these diseases were: Diphtheria, 3; tuberculosis, 14.

Included in the above, were the following cases of non-residents: Diphtheria, 1; tuberculosis, 1.

NEWS ITEMS.

MASSACHUSETTS GENERAL HOSPITAL STAFF CLINICAL MEETING was held in the Lower Out-Patient Amphitheatre on Monday, December 12, 1921, at 8.15 P.M.

PROGRAM.

Presentation of a Case, by Dr. J. Stokes, Jr.
Original Paper on Schistosomiasis, by Drs. R. P. Strong, G. C. Shattuck and B. Tanabe.

CANCER CURES.—The New York City Department of Health has issued a warning of a cancer cure purporting to be the treatment of cancer by the use of selenium and tellurium by the so-called "Basil Cancer Research." This concern seems to have been associated with the Cosmopolitan Cancer Research Society, 847 Union Street Brooklyn. This last-named organizatoin is credited as the sponsor of an offer of a $100,000 cancer prize for the "medicinal cure for cancer."

High-sounding titles do not warrant endorsement by reputable men unless alleged facts are first submitted to competent supervision.

MEDICAL LIBERTY LEAGUE.—This organization has been conducting a rummage sale for the purpose of securing funds to be used in the campaign against compulsory vaccination. Incidentally it has been stated that the title of this organization has been changed to the Liberty League. Some endorsement of this society seems to have been secured by a misunderstanding of its purposes.

DR. WALTER B. SWIFT, A.B., O.B., S.B., M.D., B.L.I., has returned from his summer instruction at The Northwestern University, Evanston, Illinois, and has resumed private practice, as usual, at 110 Bay State Road, Boston, Mass.

APPEAL FOR THE VINCENT MEMORIAL HOSPITAL.—Owing to the steadily increasing cost of operation, the Trustees and Managers of the Vincent Memorial Hospital most reluctantly appeal again to their friends and to the public. As the hospital was founded to help women of moderate means, it seems best not to increase at this time the rates of the private rooms, but to ask for assistance in the form of annual subscriptions or donations, in order to meet the heavy expenses.

The Vincent Club is gradually endowing the beds in the ward bearing its name, but if we wish to continue to give proper care to the many deserving working women who come to us for treatment, we must obtain additional funds.

Checks, large or small, payable to the Vincent Memorial Hospital, will be most gratefully received and promptly acknowledged.

May we count on your help?

JANE DE P. WEBSTER, *President.*
ELLEN S. WHITNEY, *Vice-President.*

ACTION ON THE PART OF THE PENTUCKET MEDICAL CLUB OF HAVERHILL, MASS.—In view of the important bills on medical matters on the calendar of our State Legislature for this year, the Pentucket Medical Club of Haverhill has passed a motion, that five of its members be constituted a committee to see that the Senator and Representatives from this district are fully informed as to the scope and effect of such measures in relation to the welfare of the general public and the medical profession. That this committee be also authorized to represent the Medical Club at any legislative hearings at the expense of the Club.

Under another motion, the Club appointed a committee of three to secure competent speakers who may give enlightening talks to the general public on such subjects as vaccination, the new immunizing tests for diphtheria, antitoxin, and the like.

Obituaries.

WALTER CHANNING, M.D.

DR. WALTER CHANNING, leading alienist, died at his home in Brookline, November 23, 1921, at the age of seventy-two.

He was born in Concord on April 14, 1849, being the eldest son of William Ellery Channing, the Concord poet, and a great-nephew of William Ellery Channing, a founder of American Unitarianism.

Walter Channing's mother, Ellen Kilshaw Fuller, a sister of Margaret Fuller (Countess Ossoli), died when he was seven years old, and after he had lived much with his grandfather, Walter Channing (1786-1876), the first Professor of Obstetrics and Medical Jurisprudence in Harvard University and an editor of the *New England Journal of Medicine and Surgery* at the time it became the *Boston Medical and Surgical Journal*, in 1828.

Dr. Channing was educated at the Chauncy Hall School, Massachusetts Institute of Technology, College of Physicians and Surgeons in New York, also the Harvard Medical School (M.D., 1872), and as an interne at the Massachusetts General Hospital, as well as in Vi-

enna. He then served as assistant physician to the Asylum for Insane Criminals, New York, and as first assistant physician of the Insane Hospital at Danvers. His knowledge of a branch of medical science then unpopular with physicians, and in which little progress had been made, became known in a comparatively short time.

In 1879 he opened a "hospital," as it was then called, in Brookline, which he carried on during the rest of his life. In 1916 Dr. Channing built in Wellesley a new sanatorium, in which he was able to carry into effect many ideas which he had formulated, as to the proper treatment of curable cases of mental disease.

In addition to his work as consultant, Dr. Channing frequently testified in court cases as an alienist. One of his early appearances as an expert witness was in the trial of Guiteau, the assassin of President Garfield. He was a frequent contributor to magazines and reviews, on insanity and cognate subjects.

From 1895 to 1903 he was Professor of Mental Diseases in Tufts College Medical School, Tufts conferring on him her LL.D., in 1900.

He was a founder and the first president of the Boston Society for Psychiatry and Neurology, and had served as president of the Norfolk District Medical Society, as vice-president of the Boston Medical Library, and as a member of the Council of the American Neurological Association. He was a member also of the corporation of the Massachusetts School for the Feeble-Minded, an honorary member of the Association of Institutions for the Feeble-Minded, a member of the American Medical Association, Massachusetts Medical Society, American Medico-Psychological Association, New England Society of Psychiatry, American Association of Physical Education, Massachusetts Prison Association and the National Conference of Charities.

Dr. Channing first became a founder, and from 1896 to 1904, chief of the Department of Mental Diseases of the Boston Dispensary. He then engaged in an active campaign for the establishment by the Commonwealth of an institution to which persons showing signs of mental disorder could be sent for observation and temporary treatment. The efforts of Dr. Channing and others who worked with him at last were successful, and in 1912 the State Psychopathic Hospital in Boston became a reality; the results achieved were most gratifying to him and to those who coöperated with him.

Although the State institutions for the insane were in general satisfactory, Dr. Channing felt keenly the inferiority of the Suffolk County hospitals in which were housed the Boston insane, under the charge of the City of Boston. As it seemed impossible to improve conditions, under the existing system, he conducted the long fight to bring the very large number of insane from Boston under State control. The effort succeeded and the law was enacted. The Governor appointed Dr. Channing, in 1908, chairman of the board of trustees of the Boston State Hospital. For the next six years most of his time was devoted to the work of organization, reorganization, and the obtaining of immediate legislation, required to effect the difficult transfer of such a large number of insane to the new and better conditions.

In other interests, Dr. Channing acted as trustee of the Wrentham State School for the Feeble-Minded during its early stages (1906-1908). He was also consulting physician to the Boston Children's Aid Society and to the State Asylum for Insane Criminals.

Impressed with the importance of proper physical training for growing children and young people, he induced the town of Brookline to build a fine public swimming bath and later a municipal gymnasium, acting as chairman of the committee from 1898 to 1910. In other local affairs his principal interest was in the public schools. He served actively on the Brookline school board for fifteen years, during which much of the progress was made which placed the Brookline schools among the leading public schools of the United States.

Dr. Channing was a Unitarian in his religious affiliations, belonging to the First Parish Church in Brookline. At one time he was president of the First Parish Club, and at another time was president of the Unitarian Club, Boston. Interested in music, he was for some years a trustee of the New England Conservatory of Music.

In the right of the first Walter Channing, an officer of the Revolutionary Army, Dr. Channing was a member of the Society of the Cincinnati in Rhode Island. He belonged to the Union Club, the University Club, and the Brookline Country Club.

His wife, Anna K. Morse (Channing), died recently. Surviving Dr. Channing are three sons, Walter Channing, Jr., who is a real estate broker of Boston; Hayden Channing, a New Jersey banker, and Henry Channing, a Boston lawyer. Two daughters, Mrs. Gregg, wife of Dr. Donald Gregg of Wellesley, his partner in the sanatorium, and Mrs. Robert Rivers, of Brookline, also survive him.

JOHN JOSEPH FLYNN, M.D.

DR. JOHN J. FLYNN died at his home in Pittsfield, November 13, 1921, aged sixty years, of chronic nephritis.

The son of John and Margaret Flynn, he was born in Worcester, April 14, 1861. After graduating from Holy Cross College, he attended Jefferson Medical College in Philadelphia, receiving an M.D. there in 1884. He settled in Palmer, moving to Pittsfield in 1891.

and joining the Massachusetts Medical Society two years later. At one time he was associate medical examiner for the Berkshire District. He was a member of the Royal Arcanum and the Park Club. He is survived by his widow, who was Marcella A. Thompson of Palmer, and by one daughter.

CHARLES WALTER SWAN, M.D.

Dr. Charles W. Swan, a former physician of Boston, died December 1, 1921, at the home of his daughter in Branford, Connecticut, at the age of eighty-three. The son of Joshua and Olive Jones Swan, he was born in Lowell, on February 6, 1838. He was graduated A.B. from Harvard in 1860, and A.M. and M.D. from the same university in 1864, serving as house officer at the Massachusetts General Hospital.

He was married in Boston, on June 24, 1869, to Miss Harriet W. de Karajen. Dr. Swan was, in the summer of 1862, surgical dresser on the steamer Daniel Webster, under the United States Sanitary Commission. Later in that year he was connected with the Emory United States General Hospital in Washington, D. C. On July 20, 1864, he was appointed acting assistant surgeon of the United States, and was on duty at the Government General Hospital at Readville, from which position he resigned on December 20, 1864, and then began to practise in Boston. From 1864 until 1868, Dr. Swan was pathologist at the Boston City Hospital, during which period and until 1870, he was physician, also, at The Channing Home. Joining the Massachusetts Medical Society in 1865, he became recording secretary of that organization in 1868, a position which he held until 1873, when he was elected corresponding secretary. About the year 1898, he moved to Brookline, and in 1905 to Lowell, resigning the office of corresponding secretary in June, 1906, and becoming a permanent resident of Lowell. He was secretary of the Obstetrical Society of Boston for ten years, was a member of the Boston Society of Natural History and of the New England Botanical Club, also holding membership in the Boston Societies of Medical Observation and Medical Improvement.

Dr. Swan was an authority on the grasses, and left behind him an herbarium of many specimens.

A meeting of the Harvard Medical Society was held in the Peter Bent Brigham Hospital Amphitheatre Tuesday evening, December 13th. Program: "The Mechanism of Fever," Dr. R. T. Woodyatt of Chicago.

Miscellany.

FOURTEENTH ANNUAL CHRISTMAS SEAL SALE.

The annual Health Christmas Seal Sale has become a recognized American institution. The organized volunteer fight against tuberculosis has for many years been successfully financed by the penny sticker. Each year the proceeds of the Sale have made a normal growth of the work possible, until now the National Tuberculosis Association and its 1400 affiliated organizations are considered models of organization. They have also developed programs of some of the most intensive health work in progress in the country.

The Massachusetts Tuberculosis League and its affiliated organizations are promoting chiefly two types of work: the discovery of tuberculosis in its early stages and child health work for the prevention of the disease. The former is being conducted in coöperation with the State Department of Health and other interested agencies. Especial effort is being made to cover rural territory not provided with dispensary service.

Preventive effort includes educational work, emphasizing the training of children in good health habits, and work with delicate children. The League and its organizations recognize the delicate child as a potential case of tuberculosis to be built up by scientific medical and nursing care, in order that he may successfully resist all preventable diseases and develop into a citizen who will be an asset rather than a liability to his community.

Christmas Seal funds are also used for any form of child health work where needed, so far as they are sufficient, including dental clinics and the supplying of additional nourishment for delicate children of poor families, especially of the tuberculous.

Two hundred thousand dollars is the amount asked from the entire State for the Christmas Seal Sale. This is not an amount arbitrarily set, but represents the budgets necessary to carry on the work of the Massachusetts Tuberculosis League and its affiliated organizations, and to make the five per cent. contribution to national work.

Tuberculosis organizations are the result of the efforts of the medical profession to interest the people in this great health problem. They can continue to accomplish this purpose only in so far as the medical profession stands back of the movement.

STAFF CLINICAL MEETING OF THE MASSACHUSETTS GENERAL HOSPITAL, NOVEMBER 7, 1921.

Dr. Robert B. Osgood presided. The papers presented were as follows:

1. The Treatment of Strychnin Poisoning by the Use of Magnesium Sulphate, by Dr. Harold S. Dorrance.

Dr. Dorrance reviewed the work of Meltzer and Auer on the pharmacological action of magnesium sulphate, and the work of S. J. Meltzer alone, on the use of magnesium sulphate to control the convulsions of tetanus. The case cited was admitted to the hospital during the past month.

"A woman, 29 years old, was brought in one evening, having taken an unknown quantity of strychnin glycero phosphate by mistake. She showed rapidly recurring convulsive spasms of the muscles of the limbs and trunk, with great activity of the reflexes and greatly exaggerated irritability to stimuline. She was given 6 cm. of a 25% solution of magnesium sulphate intraspinously, and had no more convulsions. There were no more signs of strychnin poisoning in this case, but profound depression of the central nervous system following the use of salt, perhaps in a small part due to a large dose of bromides. There was elevation of temperature, flaccid paralysis of the lower muscles for forty-eight hours, signs of meningeal irritation, and cloudy spinal fluid under increased pressure. There was, however, no depression of respiration. These effects of magnesium sulphate soon disappeared and the patient was discharged in good health ten days after admission."

2. Discussion, by Dr. Eliot G. Cutler:

"It is a great pleasure to be asked to discuss this case, because about six years ago I took part in presenting a similar case in which magnesium sulphate was used for the first time as the therapeutic agent. The patient, a child of one and one-half years, had eaten one-third of a grain of strychnin. Shortly afterward, the mother noticed that the child showed muscular twitching. Then the patient vomited, and before reaching the hospital began to have severe, generalized, convulsive jerks. General anesthesia was administered. Just previous to this case, we had impressed upon us the newer methods of treating tetanus, among them Meltzer's use of magnesium sulphate. Struck by the strong resemblance to tetanus convulsions, we administered a 25% solution of the drug. The convulsions immediately ceased.

"In order to prove our beliefs as to the control of strychnin convulsions by the use of magnesium sulphate, we performed a considerable number of laboratory experiments on the cat, being able entirely to control the convulsions and to save animals given a twice lethal dose of strychnin. It seems a rational, simple, and efficacious treatment for the condition."

3. Dr. Z. B. Adams' Remarks on Congenital Dislocation of the Hip; and Bone Tuberculosis in France:

"A survey of the present treatment of congenital dislocation of the hip, made by the Commission of the American Orthopedic Association, shows that the present treatment in this country by manual reduction,—Hibbs-table, Bradford-wrench, etc.,—is not satisfactory. Of three hundred and ten hips treated by these methods in this country, eighty were failures.

"The method of Professor Denuce, of Bordeaux, is characterized by gentleness. The hip is gently hooked into the socket after a very gentle stretching. It is held for six months and then the cure is commenced. Development of the muscles by exercise, local heat, buoyant salt baths, and heliotherapy, are used to harden the bone. No walking is permitted for three or four months after the plaster comes off. Of children of all ages, Denuce reports seven hundred and twenty-five hips treated, with two failures.

"At Burke-Plage, children and adults with bone tuberculosis are treated by prolonged recumbency and sunlight."

4. The Treatment of Structural Scoliosis at the Massachusetts General Hospital, by Dr. Armin Klein.

"The aim of the Massachusetts General Hospital Out-Patient Scoliosis Department is to improve the symmetry of the severe scoliosis patients so that, with proper training, the muscles may become adequate to compensate for the deformity. First, the patient exercises to mobilize the contracted muscles and ligaments, and to acquire control over his respiratory muscles. Then he is placed in a fenestrated, corrective plaster jacket applied in an Abbott frame, with his pelvic girdle rotated on his shoulder girdle. Once in the jacket, his respiratory muscles, previously cultivated, and in action twenty-odd thousand times a day, are relied upon to effect symmetry. Felt padding is applied once a week between the posterior convexity of the ribs and the cast; and the cast itself is changed as soon as it is no longer efficacious. The series of casts is interspersed with exercise periods, and thus atrophy is, to a great extent, avoided. Then, as soon as the maximum amount of correction has been attained, the patient returns for muscle-strengthening exercises, wearing some retaining apparatus—as a modified Osgood butterfly brace. With this régime continued till the age of twenty-five, the patient may expect, after that, to be symmetrical, well-balanced, and rather a normal-looking individual."

5. The Treatment of Tuberculosis and Fracture of the Spine, by Dr. Lloyd T. Brown.

"The treatment of tuberculosis of the spine, as well as of fracture, not complicated by cord injuries, is either conservative or operative. The conservative treatment of tuberculosis is carried out on the same general plan that Dr. Adams spoke of, as seen in France. We, in this country, however, are not able to keep the

recumbency more than one or two years. The operative treatment is done only in selected cases, as can be seen by the fact that only 48 cases, or 42 per cent. of 113 cases, were operated upon. In the fractures, 12 cases, or 52 per cent., were operated upon.

"We divide the tubercular cases, as regards operative treatment, into adults and children; only two children have been operated upon in the cases above quoted.

"Since 1917, we have tried out in 35 cases the use of a beef rib transplant as a splint for the spinous processes. These have all done well, and the graft has given the splinting necessary to control the original condition. Two cases died from infection, not due to the transplant. Four cases have returned for secondary operation, two for fracture of the transplant, and two because of secondary attacks, not immobilized by the transplant. The transplant that was recovered at operation in one case, showed no change of the original transplant. In another, it showed definite growing of new bone into the dead cortex. One other case died of miliary tuberculosis, between three and four months after the transplant was put in. The spine of this case was obtained at autopsy, and careful examinations are being made of this,—the report to be made later. Animal experiments are also being made to see if the beef bone transplant stimulates growth of new bone, and if so, if this new bone growth is greater by the Albee method or by the Hibbs method of spinal immobilization."

Correspondence.

MATERNITY LEGISLATION.

COMMONWEALTH OF MASSACHUSETTS.

HOUSE OF REPRESENTATIVES

OFFICE OF THE SPEAKER

State House, Boston, December 2, 1921.

MR. EDITOR:—

Among the subjects discussed at the various meetings of the District Medical Societies has been that of maternity legislation. The hope has been expressed that the physicians of the State would keep in close touch with the situation and give those of us who are in public life the benefit of expert information and advice.

May I, therefore, take this opportunity of calling to the attention of the profession, the passage by the National Congress of the so-called "Sheppard-Towner" bill which was approved by President Harding on November 23. This Act provides for a five year program of federal aid to the several States

> "for the purpose of cooperating with them in promoting the welfare and hygiene of maternity and infancy."

The financial provisions are as follows: Each State is to be given a federal grant of $10,000 for the present year and $5,000 annually thereafter "for the period of five years." This alone means a federal expenditure of $480,000 the first year and $240,000 thereafter. In addition, $1,000,000 is to be appropriated each year and is to be distributed, $5,000 to each State and the balance, less $50,000 for expenses, among the States on the basis of population. The annual payment of $10,000 and $5,000 appears to be outright regardless of State appropriation, but the distribution from the $1,000,000 fund is contingent upon each State appropriating an amount equal to the federal grant. If the Act is accepted by Massachusetts, this State would apparently receive $41,000 in 1922 and $36,000 thereafter "for the period of five years." It is not wholly clear to me whether this Act continues for five or for six years. It seems clear to me that some of the child hygiene work now done by our Department of Public Health would be approved under the Act and entitle this state to a portion at least of the federal grant, but I have not the exact figures available.

The Board of Maternity and Infant Hygiene will consist of the Surgeon-General of the United States Public Health Service, the United States Commissioner of Education and the Chief of the Children's Bureau who is to be the executive officer. The administration of the Act is lodged in the Children's Bureau. In order to secure the federal aid, the State must accept the Act and designate a State agency to carry it out. It is provided, however, that if the State has a child welfare or child hygiene division in its health department, that department shall administer the Act. It would seem, therefore, that if Massachusetts accepted the Act it would be administered through the Division of Hygiene of the Department of Public Health.

The State must submit detailed plans for carrying out the Act subject to the approval of the board. If the plans conform to the Act and are "reasonably appropriate and adequate to carry out its purpose they shall be approved by the board." This should place the initiative with the State authorities and so avoid arbitrary and bureaucratic uniformity. A significant feature of the Act is Section 14 providing that—"This act shall be construed as intending to secure to the various States control of the administration of this act within their respective States subject only to the provisions and purposes of this act." This again guarantees a greater freedom of State action than is found in most federal aid legislation.

The work for maternity and infancy welfare and hygiene is therefore left to each State to determine and to administer subject only to federal approval of the plans. The presence of the Surgeon-General as a member of the board makes it apparent that the intent of Congress is to promote health and not miscellaneous and undefined social theories. Perhaps the most important feature of the Act is found in Section 12 prohibiting the use of any moneys appropriated thereunder by State or nation "for the payment of any maternity or infancy pension, stipend or gratuity."

Massachusetts through federal taxation will be required to bear its full share of this new federal expenditure aggregating $1,480,000 for the fiscal year ending June 30, 1922, and $1,240,000 annually during the balance of the five-year period.

But Massachusetts cannot receive the benefits of the Act and share fully in the distribution unless the Act is accepted by the Legislature, adequate plans are made by the Department of Health for the administration thereof, these plans approved by the federal board and the necessary appropriations made to meet the federal money. Apparently the original payment of $10,000 together with $5000 a year thereafter can be received by the State without an equal appropriation of its own, but the balance of the subsidy, as pointed out above, is contingent on a State appropriation of equal amount.

Here is machinery under which the Department of Public Health with legislative approval may inaugurate at a very reasonable cost a carefully worked out program of education, assistance and investigation in the field of maternity care. The Act is temporary and at the end of five years both State and nation will be in a position to judge whether the work is of real value or not. No far-reaching maternity pension

scheme can be inaugurated under this Act, no system of State medicine created nor any undue interference with family life permitted. In fact, the Act provides that no official or agent shall enter any home or take charge of any child over the objection of the parents or guardian, a safeguard probably unnecessary because guaranteed by existing law.

During the past few years I have given some study to this general problem. If this Act is accepted, the Department of Public Health will be in a position to gain a vast amount of information and experience. When the five year period has expired we will be in a position to determine with some degree of wisdom what the future and permanent action of Massachusetts ought to be.

Sincerely yours,

BENJAMIN LORING YOUNG.

A copy of the bill appears below.

[PUBLIC—No. 97—67TH CONGRESS.]
[S. 1039.]

An Act For the promotion of the welfare and hygiene of maternity and infancy, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby authorized to be appropriated annually, out of any money in the Treasury not otherwise appropriated, the sums specified in section 2 of this Act, to be paid to the several States for the purpose of coöperating with them in promoting the welfare and hygiene of maternity and infancy as hereinafter provided.

SEC. 2. For the purpose of carrying out the provisions of this Act, there is authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the current fiscal year $480,000, to be equally apportioned among the several States, and for each subsequent year, for the period of five years, $240,000, to be equally apportioned among the several States in the manner hereinafter provided: *Provided*, That there is hereby authorized to be appropriated for the use of the States, subject to the provisions of this Act, for the fiscal year ending June 30, 1922, an additional sum of $1,000,000, and annually thereafter, for the period of five years, an additional sum not to exceed $1,000,000: *Provided further*, That the additional appropriations herein authorized shall be apportioned $5,000 to each State and the balance among the States in the proportion which their population bears to the total population of the States of the United States, according to the last preceding United States census: And *provided further*, That no payment out of the additional appropriation herein authorized shall be made in any year to any State until an equal sum has been appropriated for that year by the legislature of such State for the maintenance of the services and facilities provided for in this Act.

So much of the amount apportioned to any State for any fiscal year as remains unpaid to such State at the close thereof shall be available for expenditures in that State until the close of the succeeding fiscal year.

SEC. 3. There is hereby created a Board of Maternity and Infant Hygiene, which shall consist of the Chief of the Children's Bureau, the Surgeon-General of the United States Public Health Service, and the United States Commissioner of Education, and which is hereafter designated in this Act as the Board. The Board shall elect its own chairman and perform the duties provided for in this Act.

The Children's Bureau of the Department of Labor shall be charged with the administration of this Act, except as herein otherwise provided, and the Chief of the Children's Bureau shall be the executive officer. It shall be the duty of the Children's Bureau to make or cause to be made such studies, investigations, and reports as will promote the efficient administration of this Act.

SEC. 4. In order to secure the benefits of the appropriations authorized in section 2 of this Act, any State shall, through the legislative authority thereof, accept the provisions of this Act and designate or authorize the creation of a State agency with which the Children's Bureau shall have all necessary powers to coöperate as herein provided in the administration of the provisions of this Act: *Provided*, That in any State having a child-welfare or child-hygiene division in its State agency of health, the said State agency of health shall administer the provisions of this Act through such divisions. If the legislature of any State has not made provision for accepting the provisions of this Act the governor of such State may in so far as he is authorized to do so by the laws of such State accept the provisions of this Act and designate or create a State agency to coöperate with the Children's Bureau until six months after the adjournment of the first regular session of the legislature in such State following the passage of this Act.

SEC. 5. So much, not to exceed 5 per centum, of the additional appropriations authorized for any fiscal year under section 2 of this Act, as the Children's Bureau may estimate to be necessary for administering the provisions of this Act, as herein provided, shall be deducted for that purpose, to be available until expended.

SEC. 6. Out of the amounts authorized under section 5 of this Act the Children's Bureau is authorized to employ such assistants, clerks, and other persons in the District of Columbia and elsewhere, to be taken from the eligible lists of the Civil Service Commission, and to purchase such supplies, material, equipment, office fixtures, and apparatus, and to incur such travel and other expense as it may deem necessary for carrying out the purposes of this Act.

SEC. 7. Within sixty days after any appropriation authorized by this Act has been made the Children's Bureau shall make the apportionment herein provided for and shall certify to the Secretary of the Treasury the amount estimated by the bureau to be necessary for administering the provisions of this Act, and shall certify to the Secretary of the Treasury and to the treasurers of the various States the amount which has been apportioned to each State for the fiscal year for which such appropriation has been made.

SEC. 8. Any State desiring to receive the benefits of this Act shall, by its agency described in section 4, submit to the Children's Bureau detailed plans for carrying out the provisions of this Act within such State, which plans shall be subject to the approval of the board: *Provided*, That the plans of the States under this Act shall provide that no official, or agent, or representative in carrying out the provisions of this Act shall enter any home or take charge of any child over the objection of the parents, or either of them, or the person standing *in loco parentis* or having custody of such child. If these plans shall be in conformity with the provisions of this Act and reasonably appropriate and adequate to carry out its purposes they shall be approved by the board and due notice of such approval shall be sent to the State agency by the chief of the Children's Bureau.

SEC. 9. No official, agent, or representative of the Children's Bureau shall by virtue of this Act have any right to enter any home over the objection of the owner thereof, or to take charge of any child over the objection of the parents, or either of them, or of the person standing *in loco parentis* or having custody of such child. Nothing in this Act shall be construed as limiting the power of a parent or guardian or person standing *in loco parentis* to determine what treatment or correction shall be provided for a child or the agency or agencies to be employed for such purpose.

SEC. 10. Within sixty days after any appropriation authorized by this Act has been made, and as often thereafter while such appropriation remains unexpended as changed conditions may warrant, the Children's Bureau shall ascertain the amounts that have been appropriated by the legislatures of the several

States accepting the provisions of this Act and shall certify to the Secretary of the Treasury the amount to which each State is entitled under the provisions of this Act. Such certificate shall state (1) that the State has, through its legislative authority, accepted the provisions of this Act and designated or authorized the creation of an agency to cooperate with the Children's Bureau, or that the State has otherwise accepted this Act, as provided in section 4 hereof; (2) the fact that the proper agency of the State has submitted to the Children's Bureau detailed plans for carrying out the provisions of this Act, and that such plans have been approved by the board; (3) the amount, if any, that has been appropriated by the legislature of the State for the maintenance of the services and facilities of this Act, as provided in section 2 hereof; and (4) the amount to which the State is entitled under the provisions of this Act. Such certificate, when in conformity with the provisions hereof, shall, until revoked as provided in section 12 hereof, be sufficient authority to the Secretary of the Treasury to make payment to the State in accordance therewith.

SEC. 11. Each State agency cooperating with the Children's Bureau under this Act shall make such reports concerning its operations and expenditures as shall be prescribed or requested by the bureau. The Children's Bureau may, with the approval of the board, and shall, upon request of a majority of the board, withhold any further certificate provided for in section 10 hereof whenever it shall be determined as to any State that the agency thereof has not properly expended the money paid to it or the moneys herein required to be appropriated by such State for the purposes and in accordance with the provisions of this Act. Such certificate may be withheld until such time or upon such conditions as the Children's Bureau, with the approval of the board, may determine; when so withheld the State agency may appeal to the President of the United States who may either affirm or reverse the action of the Bureau with such directions as he shall consider proper: *Provided*, That before any such certificate shall be withheld from any State, the chairman of the board shall give notice in writing to the authority designated to represent the State, stating specifically wherein said State has failed to comply with the provisions of this Act.

SEC. 12. No portion of any moneys apportioned under this Act for the benefit of the States shall be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any building or buildings or equipment, or for the purchase or rental of any buildings or lands, nor shall any such money or moneys required to be appropriated by any State for the purposes and in accordance with the provisions of this Act be used for the payment of any maternity or infancy pension, stipend, or gratuity.

SEC. 13. The Children's Bureau shall perform the duties assigned to it by this Act under the supervision of the Secretary of Labor, and he shall include in his annual report to Congress a full account of the administration of this Act and expenditures of the moneys herein authorized.

SEC. 14. This Act shall be construed as intending to secure to the various States control of the administration of this Act within their respective States, subject only to the provisions and purposes of this Act.

Approved, November 23, 1921.

FEE TABLES

MR. EDITOR:

It may help to form a judgment in the matter of establishing fee tables, a question which is constantly coming to the fore, to read the finding of a committee written by the eminent H. J. Bigelow, as long ago as 1849.

The inadvisability of State medical societies making fee tables for their members' use was illustrated by the case of the New Jersey Medical Society which put out a fee table among its first acts after organization in 1766, thereby forfeiting the confidence of the legislature of that State, which refused it a charter until 1790. The Suffolk District Medical Society was organized in 1849. It early gave attention to the subject of a fee table. A committee, headed by Dr. Henry J. Bigelow, was appointed, debated the matter, reported to the Suffolk District and had the question resubmitted to it with the request to consult the council of the parent society. The letter of H. J. Bigelow to the council, dated December 20, 1849, transmitting the report to the Suffolk District and a transcript of the vote of that society, attested by its secretary, E. W. Blake, have been preserved in the files. The report to the Suffolk District, which follows, was read to the council on February 6, 1850, and referred to the following committees: C. G. Putnam, H. I. Bowditch, H. J. Bigelow, all of Boston; A. Hooker, Cambridge; J. W. Bemis, Charlestown. On May 30, 1850, this committee reported to the council through Dr. Putnam, chairman, ending with this statement: "That the establishment of a fee-bill by the District Medical Society is not supported by the laws."

WALTER L. BURRAGE, *Secretary*.

The committee appointed to report upon the fee-table; upon Article XXIV of the by-laws; and upon the expediency of adding to the by-laws an article inflicting a penalty for the non-observance of the same, beg leave respectfully to report: That they have considered the subjects referred to them and that they have consulted various gentlemen conversant with the affairs of the Massachusetts Medical Society, and of the Boston Medical Association. That the Massachusetts Medical Society was chartered on the ground chiefly that "the benefit of medical institutions formed on liberal principles and encouraged by the patronage of the law is universally acknowledged." Also, because it was thought "clearly of importance that a just discrimination should be made between such as are duly educated and properly qualified for the duties of their profession, and those who may ignorantly and wickedly administer medicine, whereby the health and lives of many valuable individuals may be endangered or perhaps lost to the community," that it is the duty of the society "from time to time to describe and point out such a medical instruction or education as they shall judge requisite for candidates for the practice of physic and surgery," etc., in short, that the duties of the Massachusetts Medical Society prescribed by their charter are to improve and maintain a standard of medical education and, in certain ways, to discourage quackery. On the other hand, that the Boston Medical Association is a voluntary and not a chartered association of individuals who unite to establish a medical police, upon points of which the principal relate to their mutual professional intercourse; to their attitude toward, and to the fees to be exacted from, the public; and to the discouragement of quackery. That the Massachusetts Medical Society is established by the authority of the legislature to protect not only physicians, but the community, against the evils of inadequate or unsound medical education; while the Boston Medical Association is established by physicians for their own protection. It is plain that the objects of the two institutions are intrinsically different. The society professes to protect the community, while the association is a self-protective body. Now, the district medical society as a branch of the Massachusetts Medical Society, can possess no other rights than those delegated to it by the charter of the Massachusetts Medical Society. A district society, according to the act, is "a subordinate society" wherein the communication of cases "and experiments may be made, and the diffusion of knowledge in medicine and surgery may be encouraged and promoted," and such societies "may establish regulations for their particular government, not repugnant to the by-laws of the general society."

It would, in the opinion of your committee, especially militate with the intentions of those who granted its charter, if the Massachusetts Medical Society, in whole or in part, should adopt a by-law contemplating its own exclusive advantage or one which did not also afford an equally obvious and direct advantage to the community at large. Of this character, in the opinion of your committee, is a fee-bill or tariff of prices for medical attendance, which in fixing a minimum value for such attendance very properly tends to prevent the diminution of prices which might ensue upon competition.

Finally, the prime and immediate object of a fee-table is neither to improve medical education nor to distinguish regular from irregular practitioners. It was not, therefore, contemplated in the charter of the Massachusetts Medical Society. It is, perhaps, unnecessary to add that a fee-table prescribed to the Suffolk District Medical Society would be binding upon the medical practitioners of Chelsea. Upon these grounds the committee respectfully report that they consider it inexpedient for a district society to act upon a fee-table and recommend that the subject be referred to a committee of the Boston Medical Association. For the same reason, the committee believe it unnecessary to report upon an article inflicting a penalty upon the non-observance of a system of police which is not, in their opinion, a legitimate sphere for the action of a district branch of the Massachusetts Medical Society.

For the committee,
HENRY J. BIGELOW.

A DIFFERENT SORT OF MEDICAL MEETING.

Mr. Editor:—

A short time ago you published a letter from me in regard to the annual meeting of the Massachusetts Medical Society. I have just returned from a meeting of the Tristate District Medical Society (Illinois, Iowa and Wisconsin) which is so different from most medical meetings that I think the JOURNAL readers will be interested to hear about it.

The underlying idea of this meeting is that it should give instruction. With this idea the members come prepared to work. As the manager put it, "If a doctor does not wish to work we do not wish him to come." Work they do. The meeting occupies four days. Each day it begins at 7 A.M. and ends at 10 to 11 P.M., with one hour or less for luncheon and two hours or less for dinner and four short intermissions to get a bit of fresh air. The program is all scientific program except the last night when there is a banquet and speeches. The meeting hall (there is but one; no sections) is filled at every session and nearly always there are standees who cannot find a seat. All meetings were in the same room in the City Auditorium, and patients for clinics were brought to this place from the hospitals.

Does this sort of a meeting fill a need? The other day in Milwaukee nearly one thousand practitioners of medicine indicated that they thought so by registering and attending as many days as they could get away from practice.

What manner of papers do they have? The forenoons are devoted to diagnostic clinics, the afternoons and evenings to papers and lectures. At Milwaukee there were present over twenty invited guests from beyond the confines of the component states of the Society. The type of medicine presented is indicated by the fact that the list of speakers included the Professor of Physiological Chemistry, University of Wisconsin; the Professor of Medicine, University of Illinois; the Professor of Orthopedic Surgery, Bellevue Medical College, New York; the Professor of Medicine, University of Pennsylvania; the Professor of Pediatrics, University of Louisville; the Professor of Medicine, University of Indiana; the Professor of Surgery, University of Chicago; the Professor of Medicine, Columbia University; the Professor of Surgery, University of Michigan; the Professor of Pediatrics, University of Pennsylvania; the Professor of Orthopedics, University of Nebraska; the Professor of Medicine, Jefferson Medical College; the Professor of Surgery, Western Reserve University; the Professor of Surgery, McGill University; the Professor of Surgery at Stockholm, etc. Both practical demonstrations and theoretic discussions were listened to with profound attention.

I had the honor to give these men a clinic on the morning of the fourth day and to close their program with a lecture of nearly one hour. At five o'clock, as I ended, the hall was filled as it had been from 7 A.M. to 10 P.M. or later, for three days and from 7 A.M. that morning, with attentively listening men. It was an inspiration to talk to such an audience.

Such a meeting and such enthusiastic attention I never imagined could be possible, but it is a reality and the Society is raising a $100,000 endowment by voluntary subscription of the physicians to perpetuate and improve this kind of a medical meeting. What is being accomplished by these men in the Middle West, I trust, may suggest ways of improving the annual meeting of the Massachusetts Medical Society. Why not make ours a meeting that will bring to its members real post-graduate instruction and an opportunity to see and hear the leaders of the profession in the entire country as has been done in Iowa, Illinois and Wisconsin? I would not suggest necessarily imitation of the Tristate; a different thing might fit better to our local needs, but I am sure that the success of the Tristate indicates clearly that our meetings can be very much more worth while than they are to the practitioners of Massachusetts.

Yours very truly,
HENRY A. CHRISTIAN.

NOTICES.

THE CUTTER LECTURES ON PREVENTIVE MEDICINE.—By Clemens Pirquet, Professor of Pediatrics, University of Vienna. (1) Tuberculosis in Children, Tuesday, December 20, 1921; (2) Quantitative Nutrition, Wednesday, December 21, 1921, at the Harvard Medical School Amphitheatre, Building E, 5 to 6 P.M.

These lectures are given annually under the terms of a bequest from John Clarence Cutter, whose will provided that lectures so given should be styled the Cutter Lectures on Preventive Medicine and that they should be delivered in Boston and be free to the medical profession and the press.

All members of the classes in the Medical School, the medical profession, the press and others interested are cordially invited to attend.

NEW ENGLAND OPHTHALMOLOGICAL SOCIETY.—The next meeting of the Society will be held at the Massachusetts Charitable Eye and Ear Infirmary, 233 Charles Street, Boston, on Tuesday evening, December 20, 1921, at eight o'clock. Papers: Illustrated Lecture on Ophthalmic Operations, by Professor Fuchs, of Vienna.

Dr. Fuchs has very kindly consented to favor us in this way and it is hoped that members will make this a well-attended meeting.

W. HOLBROOK LOWELL, *Secretary.*

HARVARD RESEARCH CLUB.—The meeting of the Club to be held at the Harvard Medical School, Amphitheatre in Building A, at 12.30 o'clock on Friday, December 16th, will be addressed by Dr. N. C. Foot, on "Some New Facts in Connection with Caterpillar Dermatitis."

MASSACHUSETTS SOCIETY OF EXAMINING PHYSICIANS.—Meeting and Dinner at the Copley Plaza, Tuesday, December 27, at 6:30 P.M. Papers by Dr. Paul D. White and Dr. Cadis Phipps: "The Heart in Relation to Industrial Trauma." Discussion.

WM. PEARCE COUES, M.D., *Secretary.*